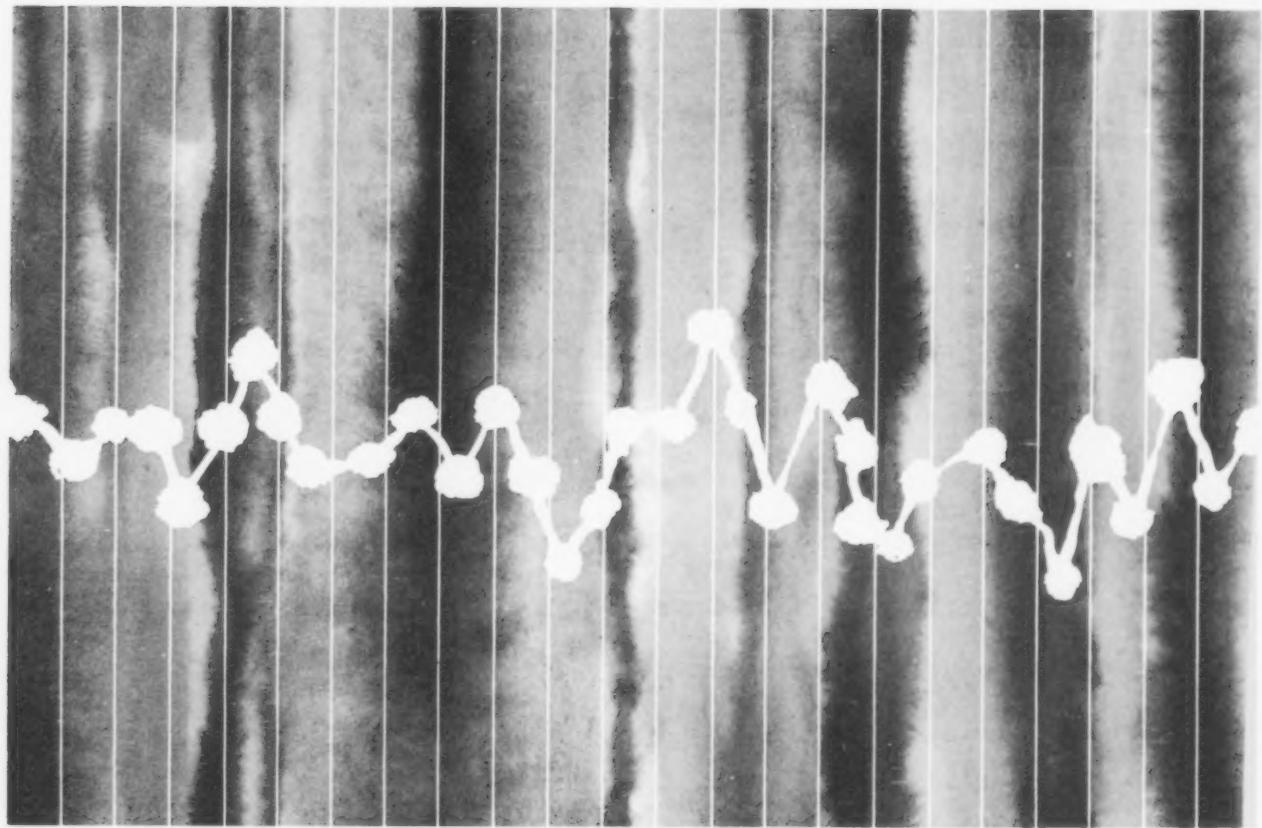


# defense indicators

JUNE 1975



U.S. DEPARTMENT OF COMMERCE • Social and Economic Statistics Administration • BUREAU OF ECONOMIC ANALYSIS



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This publication is prepared under the general guidance of an interagency committee established by the Office of Management and Budget. This committee consists of the following persons:

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# defense indicators

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## **6 SESA PROJECTS for economic analysis**

### **BUSINESS CONDITIONS DIGEST** A monthly report for analyzing economic fluctuations over a short span of years.

This report brings together approximately 600 economic time series in a form convenient for analysts whether their approach to the study of current business conditions and prospects is the national income model, the leading indicators, anticipations and intentions, or a combination of these. Other types of data such as foreign trade, Federal Government activities, and international series are included to facilitate a more complete analysis.

Data are presented in charts and tables. Appendixes provide historical data, series descriptions, seasonal adjustment factors, and measures of variability. A computer tape containing data for most of the series is available for purchase.

### **DEFENSE INDICATORS** A monthly report for analyzing the current and prospective impact of defense activity on the national economy.

This report brings together the principal time series on defense activities which influence short-term changes in the national economy. These include series on obligations, contracts, orders, shipments, inventories, expenditures, employment, and earnings. The approximately 60 time series included are grouped in accordance with the time at which the activities they measure occur in the defense order-production-delivery process. Charts and analytical tables facilitate interpretation.

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This report provides a useful combination of current data for more than 2,500 statistical series and significant articles analyzing economic developments. These data and analyses include such areas as the national income and product accounts, the balance of payments accounts, plant and equipment expenditures, regional personal income, and the input-output accounts.

### **BUSINESS STATISTICS** A biennial reference volume containing statistical series reported currently in the Survey of Current Business.

This report provides historical data back to 1947 for nearly 2,500 time series. The series are accompanied by concise descriptions as to their composition, methods of compilation, comparability, revisions, and availability. Also listed are the names and addresses of organizations which provide the basic data for the series.

## Introduction

The purpose of this monthly report is to bring together the principal time series on defense activity which influence short-term changes in the national economy. These include series on obligations, contracts, orders, shipments, inventories, expenditures, employment, and earnings. Most are monthly but a few quarterly series are included. The series numbers used are for identification purposes only and do not reflect relationships or order.

### Classification of Series

Chart 1 compares Government purchases of goods and services for national defense with total gross national product. GNP is the market value of the final output of goods and services produced by the Nation's economy and represents a very broad measure of aggregate economic activity. In addition to national defense purchases, it includes Federal Government purchases of goods and services for nondefense purposes, State and local government purchases, personal consumption expenditures, gross private domestic investment, and net exports of goods and services. Chart 1 also presents national defense purchases as a percent of gross national product and, for both series, changes from the previous quarter.

A related group of series is shown in Chart 4, "Defense-Related Balance of Payments Components." These series show the effects of defense-related economic activity on the balance of payments accounts.

The remaining series are grouped in accordance with the time at which the activities they measure occur within the defense order-production-delivery process. Those series measuring activities that usually precede production, such as new orders placed with defense products industries and contract awards, are presented in Chart 2, "Advance Indicators of Defense Activity." Chart 3, "Intermediate and Final Indicators of Defense Activity," presents series that measure activities which tend to move at the same time as production (such as employment) and activities which usually follow production (such as shipments).

### Series Included

Following is a list of the series as they appear in charts 1, 2, 3, and 4 (the source agencies are abbreviated in parentheses; detailed lists of sources for charts 1, 2, and 3 appeared as appendixes to the August and October 1968 issues of this report).

#### Gross National Product and National Defense Purchases

- Gross national product (BEA)
- Federal Government purchases of goods and services, national defense (BEA)
- National defense purchases as a percent of gross national product (BEA)
- Gross national product, changes from previous quarter (BEA)
- National defense purchases, changes from previous quarter (BEA)

#### Advance Indicators of Defense Activity

- Defense Department gross obligations incurred, total (DOD)
- Defense Department gross obligations incurred, procurement (DOD)
- Gross obligations incurred outside the Government for national defense (Treasury)

Defense Department military prime contract awards for work performed in the United States (DOD)  
Defense Department gross unpaid obligations outstanding (DOD)

Manufacturers' new orders (Census):  
    Defense products industries  
    Defense products

Manufacturers' new orders from the U.S. Government, aerospace industries (Census):  
    Average weekly overtime hours, production workers, defense products industries (BLS)

Accessions, defense products industries (BLS)  
Layoffs, defense products industries (BLS)

#### Intermediate and Final Indicators of Defense Activity

Manufacturers' inventories (Census):  
    Defense products industries  
    Defense products

Manufacturers' unfilled orders (Census):  
    Defense products industries  
    Defense products

Manufacturers' unfilled orders from the U.S. Government, aerospace industries (Census)  
Defense Department progress payments outstanding (DOD)  
Employment in defense products industries, total (BLS)  
Employment in defense products industries, production workers (BLS)

Index of aggregate weekly man-hours, defense products industries (BLS)

Index of aggregate weekly payrolls, production workers, defense products industries (BLS)

Defense Department manpower, military (DOD)  
Defense Department manpower, civilian (DOD)

Defense Department net outlays, total, military functions and military assistance (DOD)

Defense Department net outlays, procurement (DOD)

Budget outlays for the national defense function (Treasury)  
Defense Department personnel compensation (DOD)

Manufacturers' shipments (Census):  
    Defense products industries  
    Defense products

Manufacturers' shipments to the U.S. Government, aerospace industries (Census):

Ratio, manufacturers' unfilled orders to shipments (Census):  
    Defense products industries  
    Defense products

Ratio, manufacturers' inventories to shipments (Census):  
    Defense products industries  
    Defense products

#### Defense-Related Balance of Payments Components

Transfers under U.S. military agency sales contracts—exports (BEA)

Direct defense expenditures—imports (BEA)

U.S. Government cash receipts associated with military sales contracts (BEA)

Some additional data are included in the tables though not presented in the charts. These include Defense Department military prime contract awards by procurement category (e.g., for aircraft, missiles and space systems, ships, weapons, and ammunitions), the operations component of Defense Department

gross obligations incurred, gross unpaid obligations outstanding, and net outlays and the procurement component of gross unpaid obligations outstanding.

#### Description of Basic Data

The Department of Defense compiles statistics on obligations, contract awards, personnel compensation, and outlays. The DOD obligations and outlays data are based on the Defense Department's monthly *Status of Funds* report which is developed from accounting data and is designed to provide information on the total status of Defense Department financing. Accounts included in this report are aggregated by appropriation categories including personnel costs, operations and maintenance, procurement, research and development, and construction. The *Status of Funds* report duplicates some obligations. That is, obligations of one government unit to another unit are not netted out.

The Defense Department's *Contract Awards* report covers the awarding of procurement contracts. These include obligations for operating and maintenance supplies, equipment and services, research and development, and construction in addition to the obligations for items that constitute the fiscal "procurement" category. The statistics are aggregated by commodity categories including aircraft, missile and space systems, ships, weapons, ammunition, electronics and communication equipment, fuels, and textiles and clothing. The *Contract Awards* report includes procurement for NASA, other nondefense agencies, and the Foreign Military Sales Program which are not included in the *Status of Funds* report.

The Census quarterly new orders, unfilled orders and shipments series for "aerospace industries" are based on reports of companies classified into the following industry categories:

Industry	SIC Code
Aircraft and parts .....	372
Guided missiles and space vehicles, completely assembled ..	1925

The Census and BLS data for "defense products industries" presented in this report cover companies and establishments<sup>1</sup> classified into the following industry categories in accordance with the *Standard Industrial Classification Manual*, 1967 edition, Executive Office of the President, Bureau of the Budget:

Industry	SIC Code
Ordnance and accessories .....	19
Communication equipment .....	366
Aircraft and parts .....	372

Establishments reporting to the BLS are classified into industries on the basis of their principal product or activity as determined from information on annual sales volume, which is collected each year on a supplement to the monthly report. The entire employment of an establishment making more than one product or engaging in more than one activity is included under the industry accounting for the largest percentage of the annual sales of that establishment.

The Census Bureau's monthly survey is based primarily on reports at the company level and the monthly estimates are benchmarked to the establishment data from the *Annual Survey*

<sup>1</sup>An establishment is a single physical location where business is conducted (e.g., a plant). A company often includes more than one establishment.

of Manufactures. Also, many of the large diversified companies file separate divisional reports monthly. Although the reports in the survey are also classified according to their principal product or activity, this difference in the organizational level from which reports are received results in firms being classified into different industries in the BLS and Census surveys and, consequently, limits somewhat the comparability of the data collected by these agencies. However, as we know from past studies in this area, some differences in industrial classification between BLS and Census data would remain even if reports came from the same organizational levels.

Both the Census and the BLS data include a significant amount of nondefense activities carried on by companies and establishments classified in the above industries. For example, the data cover the production of commercial as well as military aircraft. On the other hand, they exclude significant amounts of defense work carried on by companies and establishments classified in industries other than those listed above (e.g., the manufacture of military uniforms and the shipbuilding industry).<sup>2</sup>

Census data for "defense products" are based on separate reports on defense work filed by large defense contractors in the ordnance, communications, complete aircraft, aircraft parts, and shipbuilding industries. Thus, they differ from the "defense products industries" data in that they include defense activity in the shipbuilding industry and exclude nondefense work in the other industries covered. Defense products data cover work for the Department of Defense and exclude contracts for the National Aeronautics and Space Administration and the Atomic Energy Commission.

The DOD data are not strictly comparable in coverage with either the BLS or the Census data since the Defense Department figures (1) cover products of industries not included in the defense products category; (2) generally do not include non-defense activities (except that some series, such as contract awards, include activities by the Department of Defense on behalf of nondefense agencies); and (3) do not cover intermediate activities such as those related to subcontracting and supplying of parts. Thus, the Census Bureau data for manufacturers' new orders and shipments of defense products industries, for example, differ in coverage from the DOD contract awards and net outlays series.

The Department of Defense data are not comparable with Federal Government purchases of goods and services for national defense or the Treasury Department obligations and outlays data since the BEA and Treasury data cover defense-related activities of other agencies such as the Atomic Energy Commission, the Selective Service System, and the Office of Emergency Planning.

Projects to improve the comparability of the data collected by the Bureau of the Census, the Bureau of Labor Statistics, and the Department of Defense and to improve the separation of defense and nondefense activity for the Census and BLS data are being undertaken by the statistical agencies under the leadership of the Interagency Committee mentioned earlier in this report.

<sup>2</sup>See the Bureau of the Census publication *Shipments of Defense-Oriented Industries*, Current Industrial Reports, Series MA-175, for annual estimates of shipments by industry to the Department of Defense, the National Aeronautics and Space Administration, and the Atomic Energy Commission. Included also are industries not covered by the "defense products industries" category.

## Variability of Data

Seasonal variations dominate the movements of many time series, and adjustments for average seasonal fluctuations are often necessary to bring out the underlying trends of the series. These seasonal adjustments allow for the effects of repetitive intrayear variations resulting primarily from normal differences in weather conditions and from various institutional arrangements. An additional adjustment is sometimes necessary for series which contain considerable variation resulting from the number of working or trading days in each month. As used in this report, the term "seasonal adjustment" includes trading-day adjustments where they have been made.

Most of the series in this report are shown in seasonally adjusted form. For Defense Department and BLS series, unadjusted data are also shown since they are not readily available elsewhere. Current seasonal adjustment factors are shown in appendix A.

The effect of seasonal adjustment in reducing the month-to-month variation in the data can be seen in appendix B. There, the first two columns show the average month-to-month percent change (without regard to sign) in the data before and after seasonal adjustment. Some series still show very irregular month-to-month movements after adjustment for seasonal variation. The measures in appendix B also indicate the month-to-month variation in the irregular and short-term trend components of the series. For many series, irregular movements tend to dominate 1- or 2-month comparisons, and the underlying short-term trend becomes dominant in comparisons over longer spans. The "months for cyclical dominance" (MCD) measure estimates the span of months required for the short-term trend to dominate the irregular component. Series with an MCD of 4 or more are supplemented with a moving average (with the

number of terms equal to MCD) in the charts. Data for these moving averages are listed in the basic data tables.

## Guide to Charts and Tables

Most series are plotted on a standard ratio scale so that equal percent changes cover the same vertical distance. For these series, an increase of 100 percent covers approximately 1 inch. Arithmetic scales are used for series with zero or negative data, series which could approach zero (e.g., average overtime hours and layoff rate), and series expressed in percent.

In general, monthly data are plotted with a solid line and quarterly data are represented by a solid line with quarterly plot points. Quarterly series are also identified with a "Q" after their titles. For series which include a moving average, a dashed line is used for the actual monthly data and a solid line for the moving average. (The moving average values are centered within the span of months they are computed from.) Exceptions to this scheme may be necessary for special situations. Data apply to the whole period except for series designated "EOM" (end of month) or "EOQ" (end of quarter). The number in the box at the right of each series indicates the latest month (Arabic) or quarter (Roman) plotted. Parallel lines across a series indicate a break in continuity (e.g., data not available or change in series definition).

Tables 1, 2, 3, and 4 present current data for the series shown in the charts, including the moving averages. They also include unadjusted data for some series and data for related series which are not plotted. Table A summarizes the most recent data and percent changes for many of the series in the report. Historical data are shown on an intermittent basis in appendix C. (The index indicates the appropriate issue for each series.)

### New Features and Changes for This Issue

The series on U.S. balance of payments have been revised for the period 1967 to date. These revisions reflect the source agency's annual updating of these statistics.

Further information concerning these revisions may be obtained from the U.S. Department of Commerce, Bureau of Economic Analysis, Balance of Payments Division.

The July issue of DEFENSE INDICATORS is scheduled for release on July 30.

**Table A. Summary of Recent Data and Current Percent Changes for Principal Defense Indicators**

(Preliminary and revised figures are not identified here but the user may consult tables 1, 2, 3, and 4 where such identification is given)

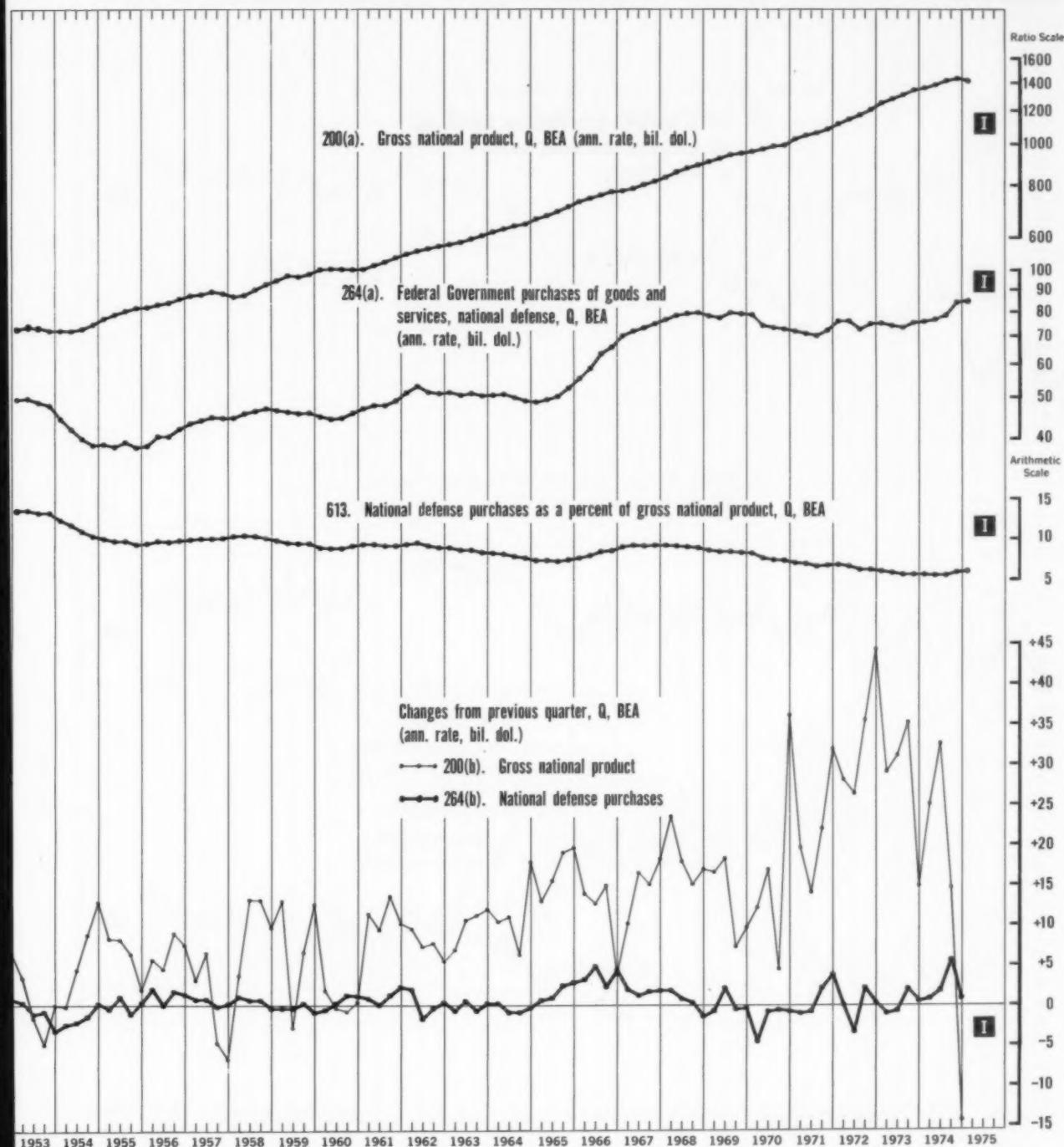
Series title	Unit of measure	Basic data								Percent change				Series number	
		Average		3d Q 1974	4th Q 1974	1st Q 1975	Mar. 1975	Apr. 1975	May 1975	Mar.'75 to Apr.'75	Apr.'75 to May '75	3d Q '74 to 4th Q '74	4th Q '74 to 1st Q '75		
		1973	1974												
<b>GROSS NATIONAL PRODUCT AND NATIONAL DEFENSE PURCHASES</b>															
200. Gross national product (BEA) .....	Ann. rate, bil. dol. ....	1294.9	1397.4	1416.3	1430.9	1416.6	***	***	***	***	***	1.0	-1.0	200	
264. Federal Government purchases of goods and services, national defense (BEA) .....	.... do .....	74.4	78.7	78.4	84.0	84.7	***	***	***	***	***	7.1	0.8	264	
613. National defense purchases as a percent of GNP (BEA) <sup>1</sup> .....	Percent .....	5.8	5.6	5.5	5.9	6.0	***	***	***	***	***	0.4	0.1	613	
<b>ADVANCE INDICATORS OF DEFENSE ACTIVITY</b>															
Defense Dept. gross obligations incurred (DOD):															
617. Total .....	Ann. rate, bil. dol. ....	85.5	93.9	97.8	96.0	93.9	104.1	95.2	NA	-8.5	NA	-1.8	-2.2	617	
621. Procurement .....	.... do .....	18.8	20.6	21.8	20.9	21.1	28.2	17.1	NA	-39.4	NA	-4.1	1.0	621	
623. Gross obligations incurred outside the Federal Government for national defense (Treasury) .....	.... do .....	89.1	101.1	108.2	102.4	NA	NA	NA	NA	NA	NA	-5.4	NA	623	
625. Defense Department military prime contract awards for work performed in the U.S. (DOD) .....	.... do .....	35.3	41.4	44.6	41.9	42.0	33.8	49.5	NA	46.4	NA	-6.1	0.2	625	
643. Defense Department gross unpaid obligations outstanding (DOD) .....	Bil. dol., end of period .....	36.8	40.0	40.5	40.0	39.8	39.8	39.5	NA	-0.8	NA	-1.2	-0.5	643	
648. Mfrs.' new orders, defense products (Census) .....	Ann. rate, bil. dol. ....	20.5	22.8	25.1	21.7	21.9	20.4	19.7	20.3	-3.4	3.0	-13.5	0.9	648	
650. Manufacturers' new orders from the U.S. Government, aerospace industries (Census) .....	.... do .....	15.9	19.2	22.9	22.6	NA	***	***	***	***	***	-1.3	NA	650	
653. Average weekly overtime hours, production workers, defense products industries (BLS) <sup>1</sup> .....	Hours .....	3.1	2.8	2.8	2.6	2.4	2.4	2.4	NA	0.0	NA	-0.2	-0.2	653	
654. Acquisitions, defense products industries (BLS) <sup>1</sup> .....	Number per 100 employees .....	2.2	2.1	2.3	1.7	1.5	1.6	NA	NA	NA	NA	-0.6	-0.2	654	
655. Layoffs, defense products industries (BLS) <sup>1</sup> .....	.... do .....	0.6	0.6	0.6	0.7	1.4	2.0	NA	NA	NA	NA	0.1	0.7	655	
<b>INTERMEDIATE AND FINAL INDICATORS OF DEFENSE ACTIVITY</b>															
657. Output of defense and space equipment (FRB) .....	1967=100 .....	80.4	82.4	82.8	83.7	82.8	82.1	82.2	81.8	0.1	-0.5	1.1	-1.1	657	
659. Mfrs.' inventories, defense products (Census) .....	Bil. dol., end of period .....	5.6	6.5	6.4	6.5	6.9	6.9	7.0	NA	1.4	NA	1.6	6.2	659	
661. Mfrs.' unfilled orders, defense products (Census) .....	.... do .....	20.7	24.6	24.0	24.6	25.0	25.0	24.9	24.9	-0.4	0.0	2.5	1.6	661	
664. Manufacturers' unfilled orders from the U.S. Government, aerospace industries (Census) .....	.... do .....	16.4	20.7	19.0	20.7	NA	***	***	***	***	***	8.9	NA	664	
666. Defense Department progress payments outstanding (DOD)@ .....	.... do .....	7.4	9.2	8.5	9.2	9.6	***	***	***	***	***	8.2	4.3	666	
Employment in defense products industries (BLS):															
670. Total .....	Thousands .....	1,161	1,181	1,154	1,169	1,136	1,124	1,112	1,123	-1.1	1.0	1.3	-2.8	670	
671. Production workers .....	.... do .....	616	610	598	615	587	578	565	569	-2.2	0.7	2.8	-4.6	671	
673. Index of aggregate weekly man-hours, defense products industries (BLS) .....	1967=100 .....	69.1	68.4	67.7	68.8	66.8	66.0	65.7	NA	-0.5	NA	1.6	-2.9	673	
675. Index of aggregate weekly payroll, production workers, defense products industries (BLS) .....	.... do .....	91.9	96.6	94.6	100.7	98.1	96.9	96.7	NA	-0.2	NA	6.4	-2.6	675	
677. Defense Department manpower (DOD)@ .....	.... do .....	Thousands, end of period .....	2,202	2,140	2,157	2,140	2,137	2,137	2,127	2,124	-0.5	-0.1	-0.8	-0.1	677
678. Civilian .....	.... do .....	1,026	1,043	1,049	1,043	1,034	1,034	1,034	NA	0.0	NA	-0.6	-0.9	678	
680. Total, military functions and military assistance .....	Ann. rate, bil. dol. ....	76.3	83.6	86.6	89.3	86.2	86.3	83.5	89.9	-3.2	7.7	3.1	-3.5	680	
682. Procurement .....	.... do .....	15.7	15.5	14.3	17.8	17.2	17.3	14.3	16.9	-17.3	18.2	24.5	-3.4	682	
683. Budget outlays for the national defense function (Treasury) .....	.... do .....	78.1	84.8	85.4	92.0	89.3	88.6	87.6	NA	-1.1	NA	7.7	-2.9	683	
685. Defense Dept. personnel compensation (DOD) .....	.... do .....	32.4	33.5	33.8	34.6	33.7	33.6	34.0	NA	1.2	NA	2.4	-2.6	685	
688. Mfrs.' shipments, defense products (Census) .....	.... do .....	18.8	18.9	18.3	19.1	20.4	20.6	20.9	20.3	1.5	-2.9	4.4	6.8	688	
689. Manufacturers' shipments to the U.S. Government, aerospace industries (Census) .....	.... do .....	14.4	15.3	15.4	15.6	NA	***	***	***	***	***	1.3	NA	689	
691. Ratio, manufacturers' unfilled orders to shipments, defense products (Census) .....	Ratio .....	12.7	14.5	15.4	15.3	14.6	14.6	14.3	14.7	-2.1	2.8	-0.6	-4.6	691	
693. Ratio, manufacturers' inventories to shipments, defense products (Census) .....	.... do .....	3.5	3.9	4.2	4.1	3.9	4.0	4.0	NA	0.0	NA	-2.4	-4.9	693	
<b>DEFENSE-RELATED BALANCE OF PAYMENTS COMPONENTS</b>															
546. Transfers under U.S. military agency sales contracts—exports (BEA) <sup>1</sup> .....	Ann. rate, mil. dol. ....	2,354	2,966	3,064	3,348	3,792	***	***	***	***	***	284	444	546	
547. Direct defense expenditures—imports (BEA) <sup>1</sup> @ .....	.... do .....	4,620	5,065	5,116	5,340	5,180	***	***	***	***	***	224	-160	547	
549. U.S. Government cash receipts associated with military sales contracts (BEA) <sup>1</sup> .....	.... do .....	2,290	2,957	3,992	3,048	4,500	***	***	***	***	***	-944	1,452	549	

NOTE: This table is presented as a convenient summary of the current data for many of the indicators in this report. In many cases, data shown here are rounded to fewer digits or are in different units than those shown in tables 1, 2, 3, and 4. Where available, annual figures are those published by the source agencies; otherwise they (and the quarterly figures for monthly series) are averages or totals of the data as shown in the data tables. Series are seasonally adjusted except for those indicated by @, which appear to contain no seasonal movement.

NA = not available.

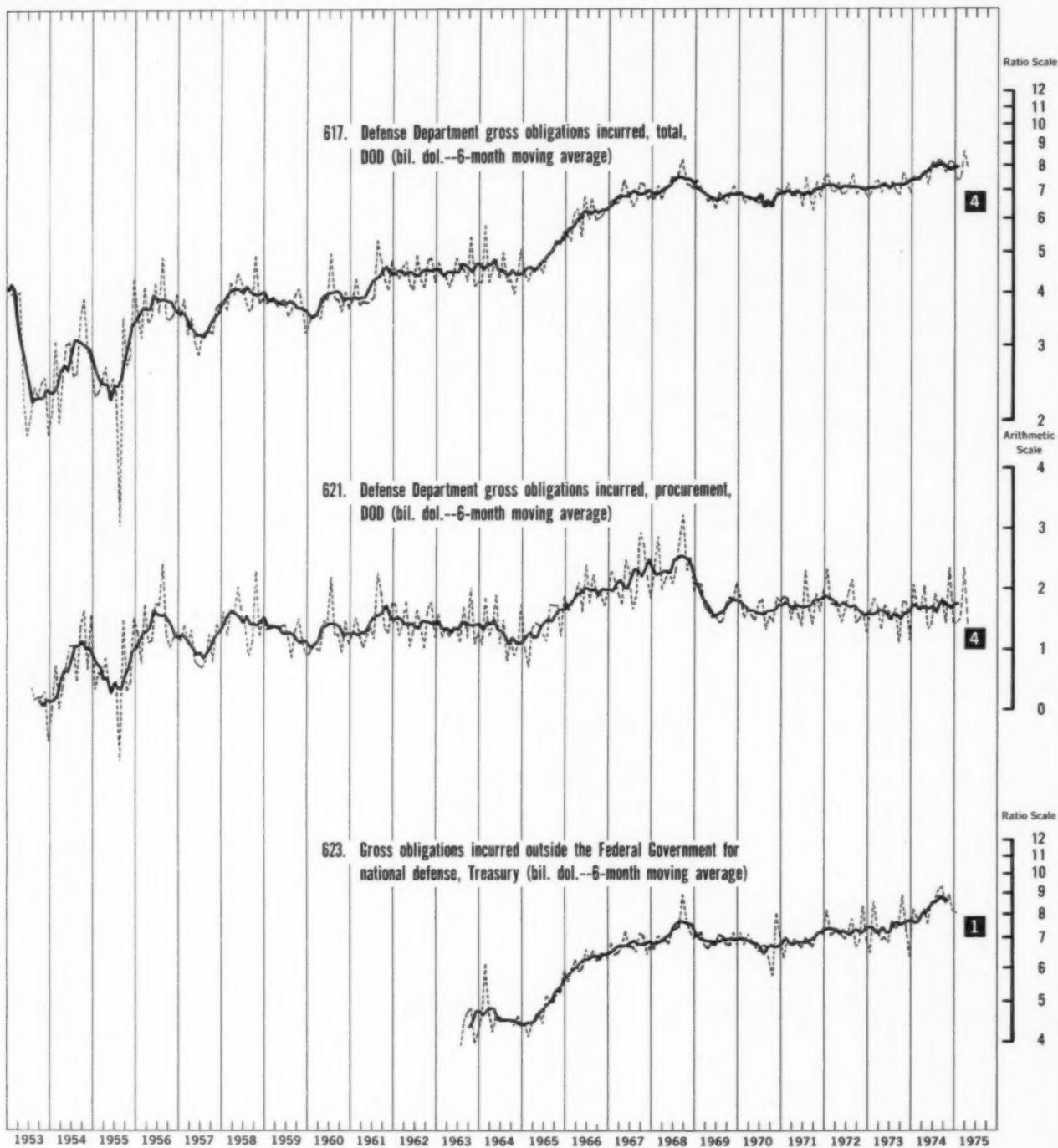
<sup>1</sup>Differences rather than percent changes are shown for this series.

## Gross National Product and National Defense Purchases



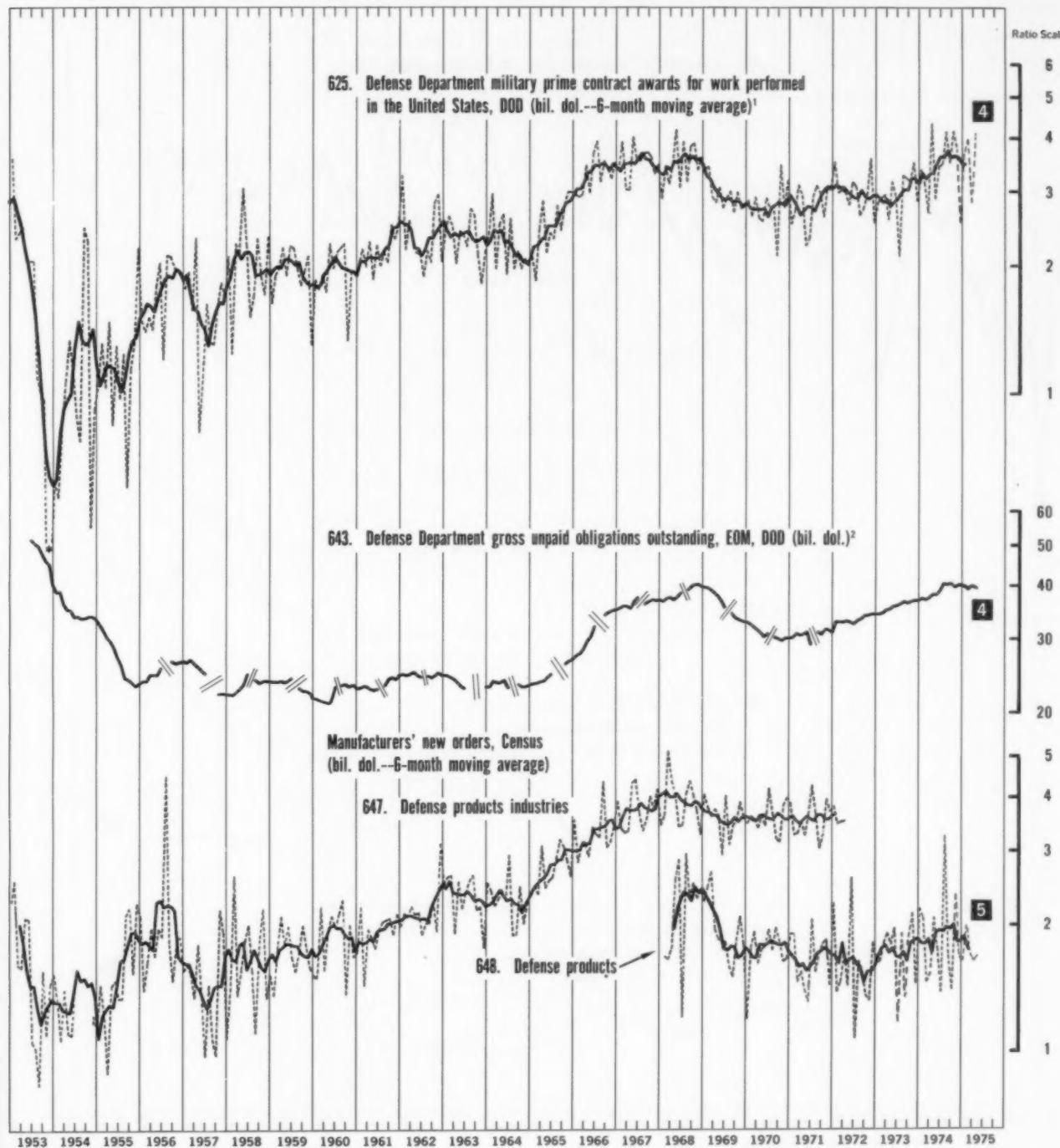
Current data for these series are shown on page 14.

CHART

**2****Advance Indicators of Defense Activity**

Current data for these series are shown on pages 15 and 16.

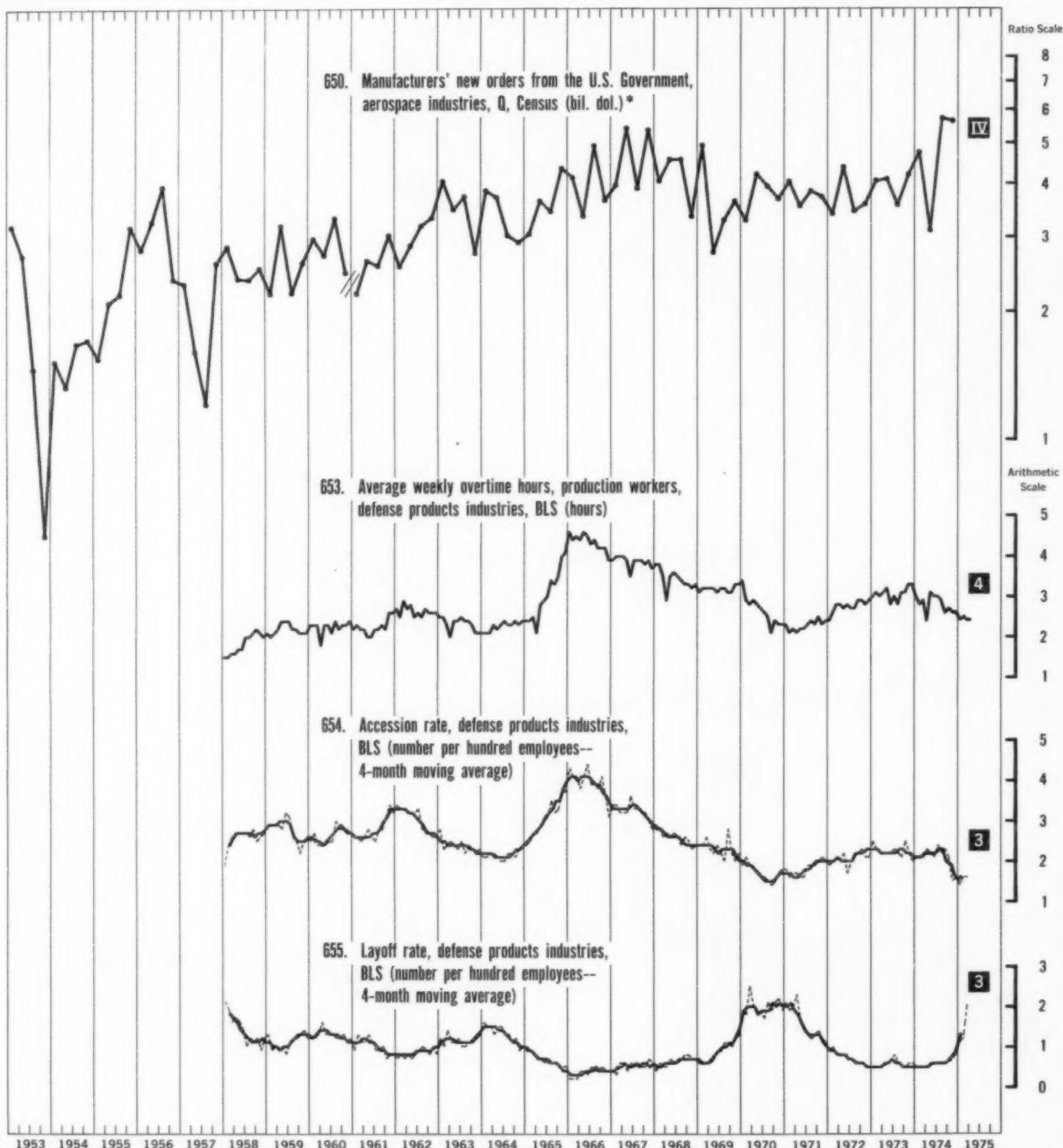
## Advance Indicators of Defense Activity--Continued

<sup>1</sup>Data prior to July 1955 exclude orders written to other Government agencies.<sup>2</sup>Data for the following months not available: July of 1956-71; August of 1956-57 and 1963-66; September of 1957, 1963, and 1965; and October and November of 1963.

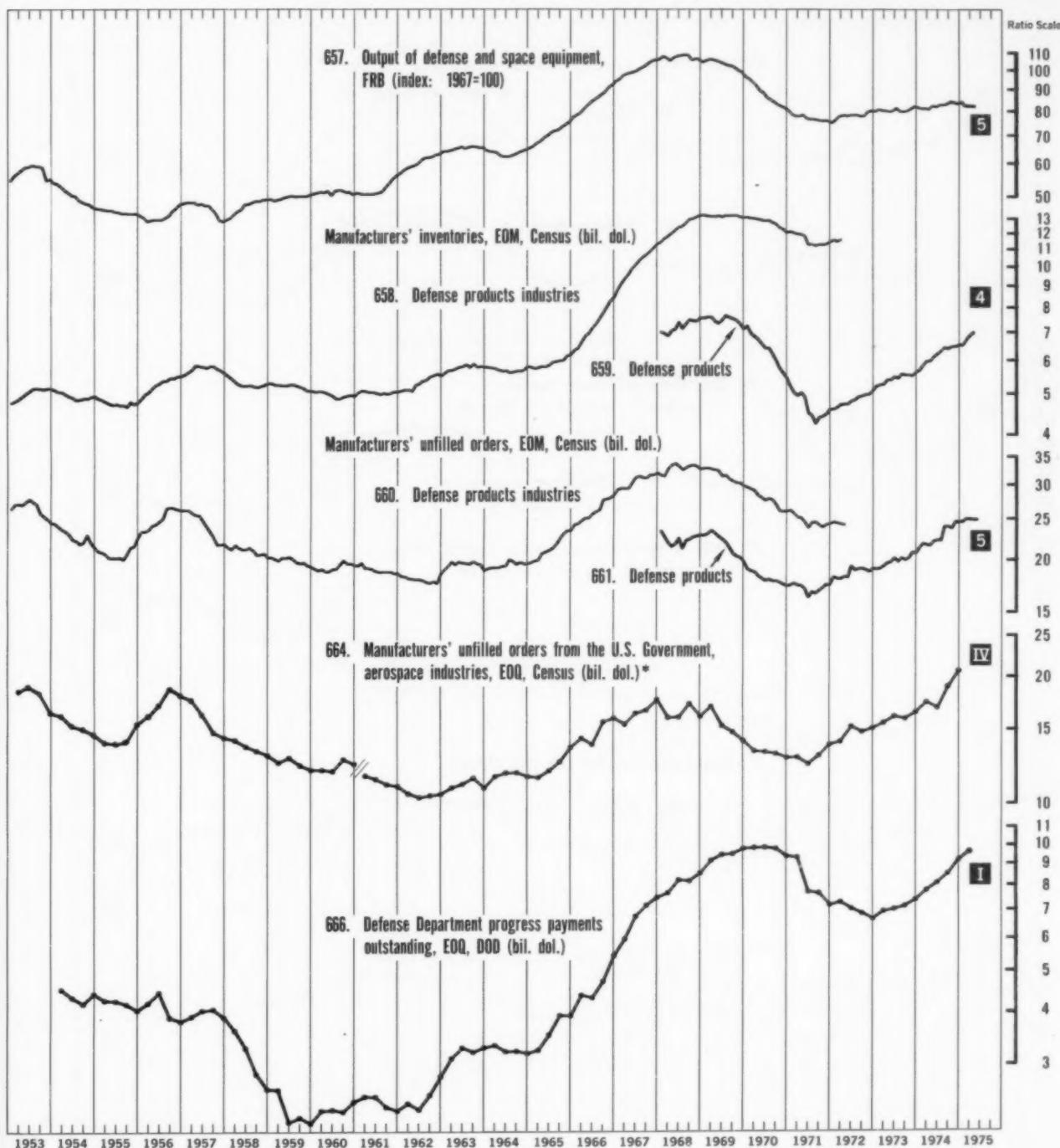
\*Contract awards for November 1953-\$265 million; December 1953-\$390 million.

Current data for these series are shown on pages 16 and 20.

CHART

**2****Advance Indicators of Defense Activity--Continued**

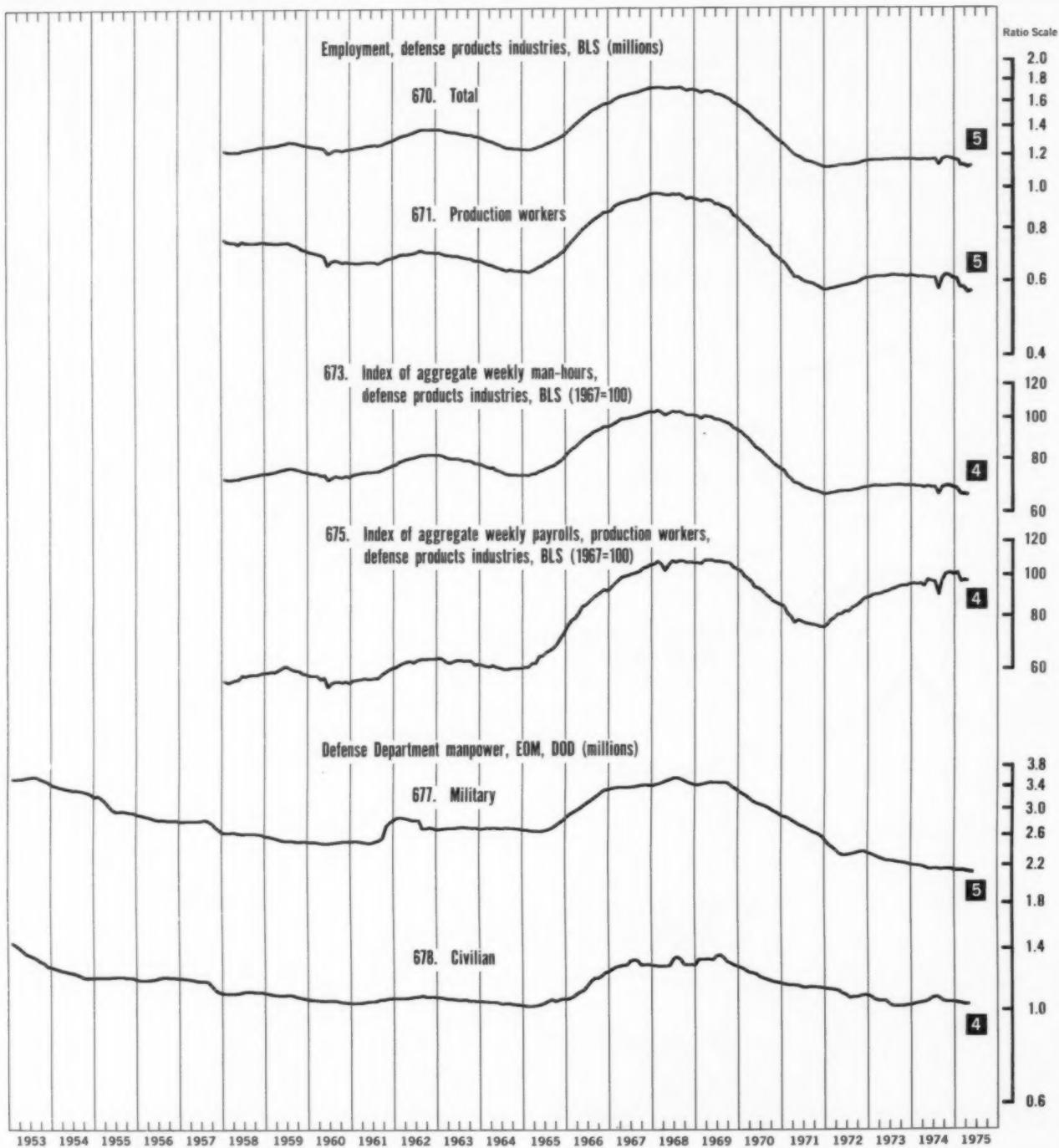
## Intermediate and Final Indicators of Defense Activity



\* Data prior to 1961 include orders from non-Government customers.

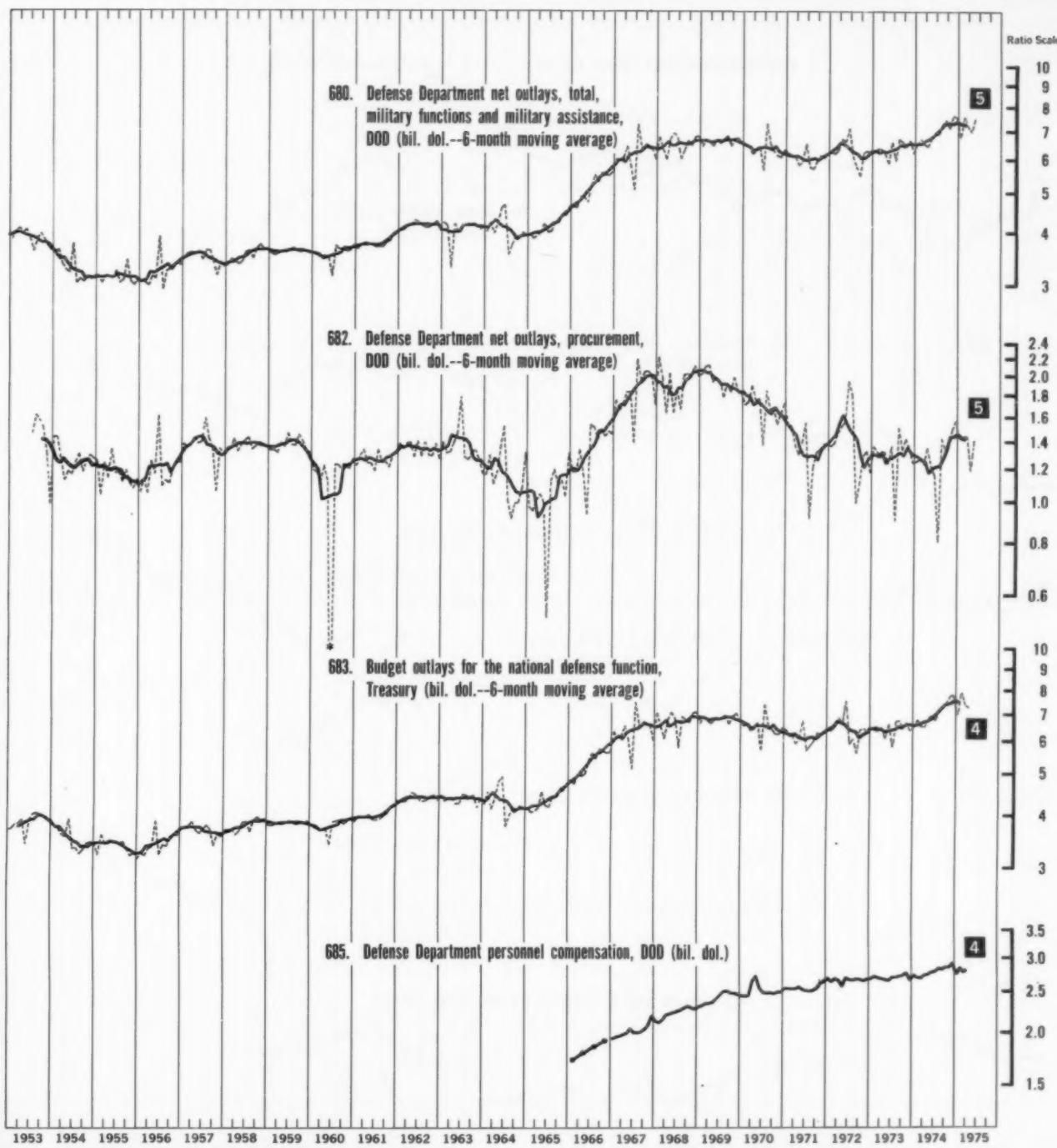
Current data for these series are shown on page 22.

CHART

**3****Intermediate and Final Indicators of Defense Activity--Continued**

Current data for these series are shown on pages 22, 23, and 24.

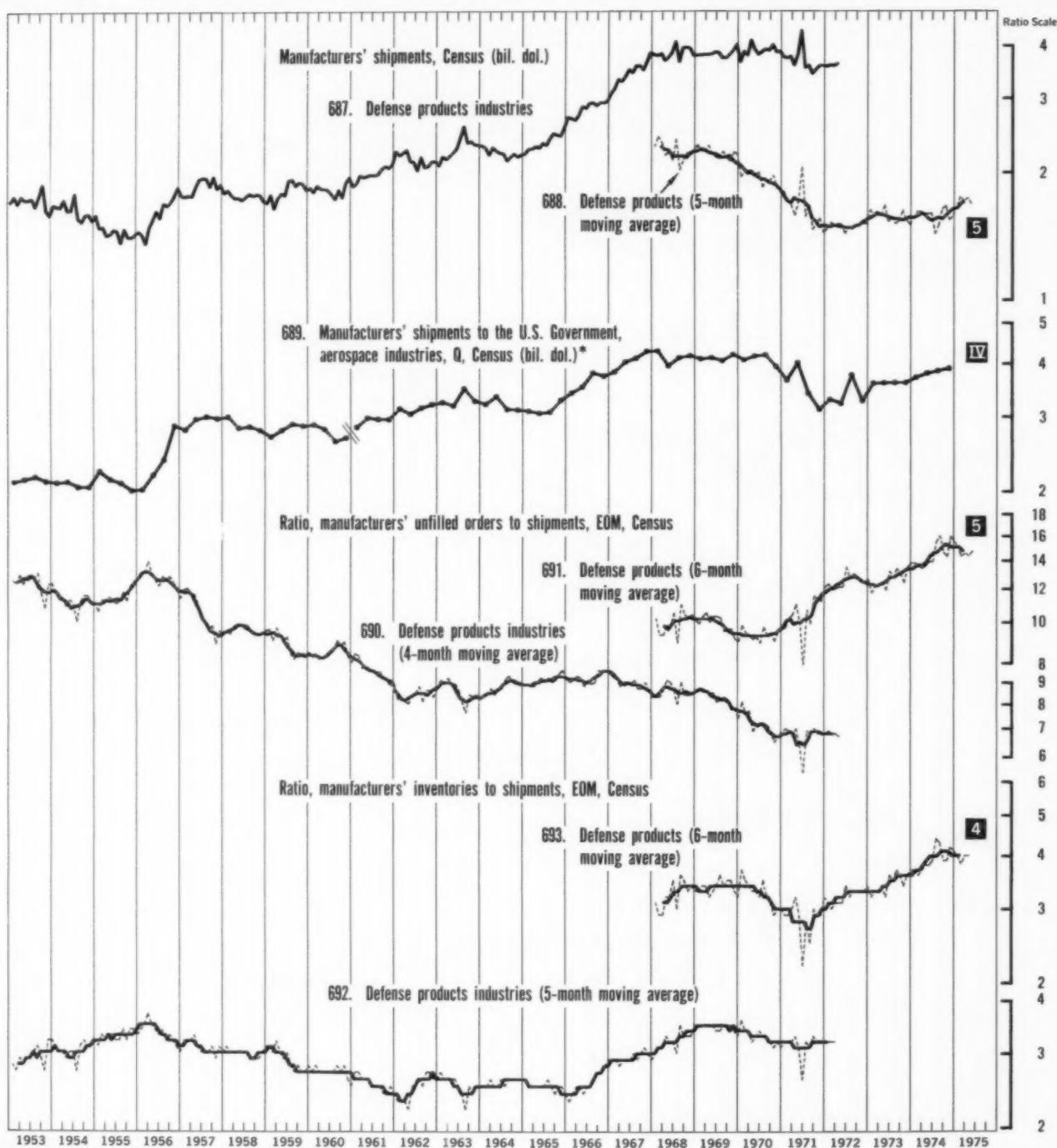
## Intermediate and Final Indicators of Defense Activity--Continued



\* Net expenditures for procurement, June 1960-\$245 million.

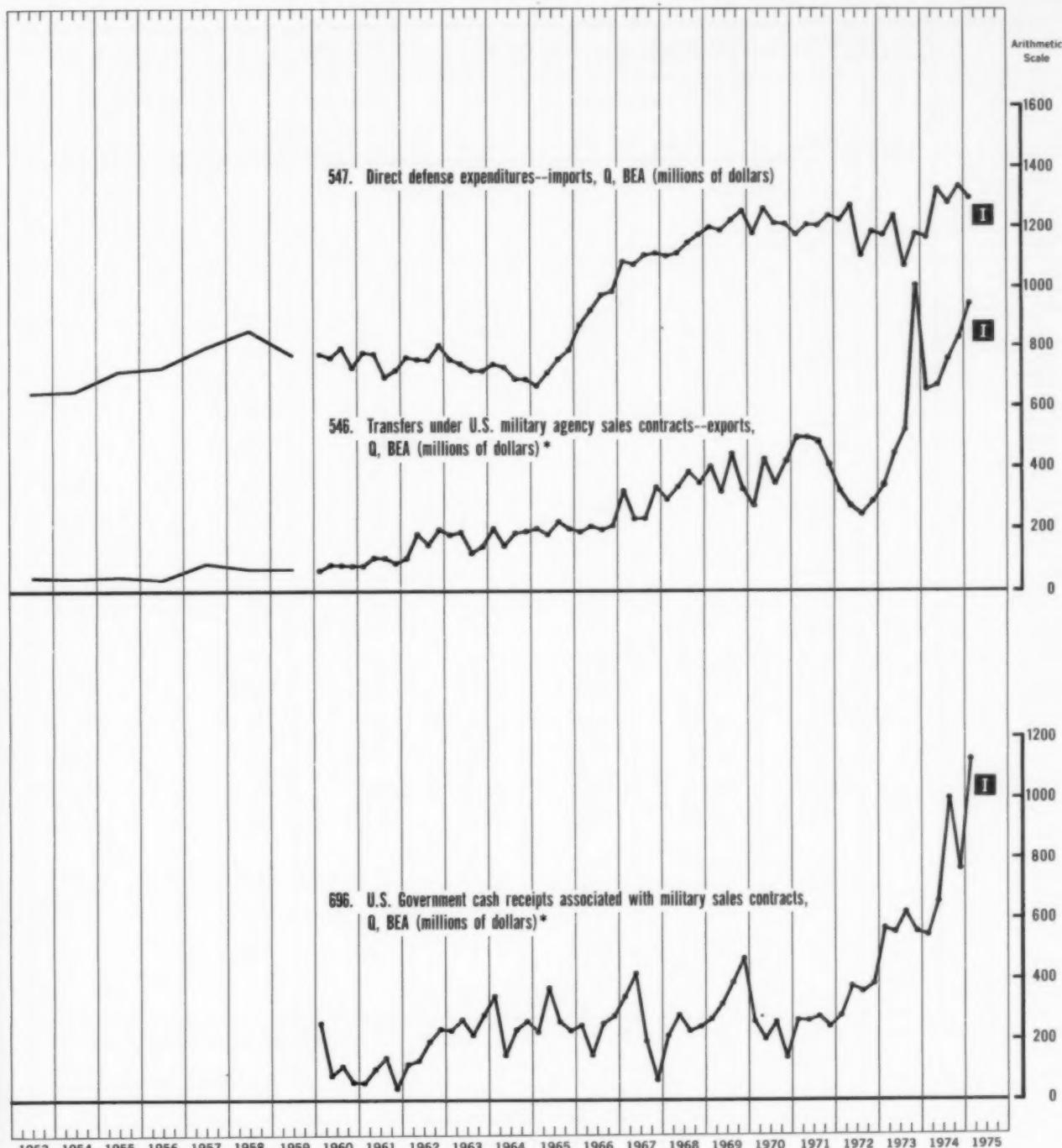
Current data for these series are shown on pages 24 and 25.

CHART

**3****Intermediate and Final Indicators of Defense Activity--Continued**

\* Data prior to 1961 include shipments to non-Government customers.  
Current data for these series are shown on page 26.

CHART

**4****Defense-Related Balance of Payments Components**

\* See footnotes 1 and 2 on page 27.  
Current data for these series are shown on page 27.

defense indicators

TABLE  
1

Gross National Product and National Defense Purchases

Year and month	200(a). Gross national product, BEA*	264(a). Federal Govern- ment purchases of goods and services, national defense, BEA*	613. National defense purchases as a percent of gross national product, BEA*	200(b). Change in gross national product, BEA*	264(b). Change in Federal Government purchases of goods and services, national defense, BEA*
	(Ann. rate, bil. dol.)	(Ann. rate, bil. dol.)	(Percent)	(Ann. rate, bil. dol.)	(Ann. rate, bil. dol.)
1973					
January .....					
February .....	1,248.9	75.0	6.0	44.2	0.3
March .....	...	...	...	...	...
April .....	...	...	...	29.0	-1.0
May .....	1,277.9	74.0	5.8	...	...
June .....	...	...	...	...	...
July .....	...	...	...	31.0	-0.7
August .....	1,308.9	73.3	5.6	...	...
September .....	...	...	...	...	...
October .....	...	...	...	35.1	2.0
November .....	1,344.0	75.3	5.6	...	...
December .....	...	...	...	...	...
1974					
January .....					
February .....	1,358.8	75.8	5.6	14.8	0.5
March .....	...	...	...	...	...
April .....	...	...	...	25.0	0.8
May .....	1,383.8	76.6	5.5	...	...
June .....	...	...	...	...	...
July .....	...	...	...	32.5	1.8
August .....	1,416.3	78.4	5.5	...	...
September .....	...	...	...	...	...
October .....	...	...	...	14.6	5.6
November .....	1,430.9	84.0	5.9	...	...
December .....	...	...	...	...	...
1975					
January .....					
February .....	1,416.6	84.7	6.0	r-14.3	0.7
March .....					
April .....					
May .....					
June .....					
July .....					
August .....					
September .....					
October .....					
November .....					
December .....					

Note: All data on this page are seasonally adjusted. NA=not available; p=preliminary; r=revised; e=estimated. \*Indicates series shown in charts. (See page 5.)

## Advance Indicators of Defense Activity

Year and month	Defense Department gross obligations incurred, DOD							
	617. Total			619. Operations		621. Procurement		
	Not seasonally adjusted	Seasonally adjusted*	Moving average of seasonally adjusted data— 6-month*	Not seasonally adjusted	Seasonally adjusted	Not seasonally adjusted	Seasonally adjusted*	Moving average of seasonally adjusted data— 6-month*
	(Mil. dol.)	(Mil. dol.)	(Mil. dol.)	(Mil. dol.)	(Mil. dol.)	(Mil. dol.)	(Mil. dol.)	(Mil. dol.)
1973								
January .....	7,414	6,827	7,051	4,688	4,494	1,815	1,631	1,595
February .....	6,691	7,283	7,026	4,097	4,656	1,785	1,838	1,569
March .....	6,716	7,362	7,053	4,174	4,427	1,435	1,704	1,588
April .....	6,342	6,865	7,101	4,522	4,445	1,028	1,349	1,648
May .....	5,997	7,275	7,181	4,195	4,393	1,171	1,730	1,623
June .....	9,327	6,992	7,123	5,122	4,471	2,871	1,633	1,596
July .....	8,180	7,312	7,028	5,334	4,679	1,019	1,483	1,495
August .....	7,505	6,932	7,162	4,634	4,552	1,393	1,676	1,568
September .....	6,289	6,790	7,169	4,201	4,429	1,168	1,099	1,575
October .....	8,074	7,671	7,145	5,024	4,716	2,105	1,788	1,494
November .....	6,917	7,315	7,181	4,346	4,652	1,714	1,771	1,593
December .....	6,041	6,850	7,259	4,133	4,643	1,321	1,149	1,599
1974								
January .....	8,113	7,527	7,374	4,991	4,714	2,337	2,077	1,689
February .....	6,826	7,398	7,390	4,187	4,758	1,677	1,708	1,731
March .....	6,613	7,485	7,368	4,377	4,699	1,381	1,642	1,658
April .....	7,375	7,762	7,588	4,982	4,804	1,546	2,040	1,702
May .....	6,104	7,187	7,664	4,434	4,662	894	1,330	1,675
June .....	10,110	8,166	7,810	6,170	5,466	2,465	1,412	1,672
July .....	9,285	7,983	7,926	5,901	5,110	1,332	1,919	1,706
August .....	8,874	8,279	7,912	5,224	5,203	1,416	1,692	1,607
September .....	7,790	8,179	8,083	4,771	5,040	1,919	1,842	1,777
October .....	7,965	7,681	8,075	5,394	4,999	1,709	1,446	1,780
November .....	7,600	8,211	7,968	4,471	4,786	2,281	2,349	1,697
December .....	7,260	8,116	7,832	4,826	5,334	1,646	1,431	1,667
1975								
January .....	8,252	7,341	7,916	5,471	5,148	1,895	1,424	1,751
February .....	6,904	7,467	7,958	4,604	5,220	1,569	1,509	1,748
March .....	7,526	8,677	(NA)	4,787	5,251	1,994	2,349	(NA)
April .....	7,403	7,933	(NA)	5,424	5,209	1,147	1,425	(NA)
May .....	(NA)	(NA)		(NA)	(NA)			
June .....								
July .....								
August .....								
September .....								
October .....								
November .....								
December .....								

NA=not available; p=preliminary; r=revised; e=estimated.

\*Indicates series shown in charts. (See page 6.)

#### **defense indicators**

TABLE

2

### **Advance Indicators of Defense Activity--Continued**

NA=not available; p=preliminary; r=revised; e=estimated. \*Indicates series shown in charts. (See pages 6 and 7.)

## Advance Indicators of Defense Activity--Continued

Year and month	Defense Department military prime contract awards for work performed in the United States, DOD—Continued						
	628. Ships, not seasonally adjusted  (Mil. dol.)	629. Weapons and ammunition		630. Electronic and communications equipment		631. Combat vehicles	
		Not seasonally adjusted  (Mil. dol.)	Seasonally adjusted  (Mil. dol.)	Not seasonally adjusted  (Mil. dol.)	Seasonally adjusted  (Mil. dol.)	Not seasonally adjusted  (Mil. dol.)	Seasonally adjusted  (Mil. dol.)
1973							
January .....	84	207	...	214	...	14	...
February .....	378	226	658	215	939	11	60
March .....	85	195	...	420	...	11	...
April .....	82	150	...	237	...	12	...
May .....	78	184	725	351	959	15	65
June .....	139	566	...	654	...	54	...
July .....	337	21	...	131	...	50	...
August .....	220	81	436	354	990	24	80
September .....	203	114	...	313	...	27	...
October .....	161	105	...	248	...	116	...
November .....	465	106	310	392	900	21	214
December .....	588	192	...	261	...	56	...
1974							
January .....	52	135	...	311	...	102	...
February .....	212	244	541	415	1,013	5	253
March .....	103	142	...	206	...	40	...
April .....	190	170	...	403	...	129	...
May .....	155	123	680	270	1,110	98	502
June .....	1,175	554	...	732	...	404	...
July .....	230	37	...	321	...	59	...
August .....	625	72	453	402	1,316	104	249
September .....	134	111	...	352	...	151	...
October .....	210	122	...	598	...	25	...
November .....	328	114	334	349	1,239	22	126
December .....	109	165	...	254	...	81	...
1975							
January .....	325	125	...	414	...	21	...
February .....	251	160	515	331	1,379	66	288
March .....	11	217	...	535	...	52	...
April .....	621	147	...	313	...	23	...
May .....	(NA)	(NA)	...	(NA)	...	(NA)	...
June .....							
July .....							
August .....							
September .....							
October .....							
November .....							
December .....							

NA=not available; p=preliminary; r=revised; e=estimated.

## defense indicators

TABLE

**2**

### Advance Indicators of Defense Activity--Continued

Year and month	Defense Department military prime contract awards for work performed in the United States, DOD—Continued							
	632. Other hard goods		633. Soft goods		634. Construction		635. Services	
	Not seasonally adjusted	Seasonally adjusted	Not seasonally adjusted	Seasonally adjusted	Not seasonally adjusted	Seasonally adjusted	Not seasonally adjusted	Seasonally adjusted
	(Mil. dol.)	(Mil. dol.)	(Mil. dol.)	(Mil. dol.)	(Mil. dol.)	(Mil. dol.)	(Mil. dol.)	(Mil. dol.)
1973								
January .....	140	...	141	...	103	...	154	...
February .....	141	458	112	519	205	484	140	755
March .....	130	...	102	...	131	...	152	...
April .....	145	...	113	...	153	...	195	...
May .....	128	480	97	488	151	442	137	776
June .....	393	...	158	...	493	...	446	...
July .....	65	...	489	...	34	...	341	...
August .....	117	432	177	553	111	377	265	653
September .....	106	...	186	...	101	...	252	...
October .....	133	...	154	...	147	...	388	...
November .....	142	365	235	600	54	450	161	663
December .....	108	...	228	...	86	...	178	...
1974								
January .....	128	...	297	...	90	...	204	...
February .....	111	467	145	1,374	52	258	138	900
March .....	179	...	487	...	92	...	181	...
April .....	294	...	344	...	248	...	166	...
May .....	139	564	214	1,081	58	504	168	846
June .....	352	...	256	...	604	...	524	...
July .....	163	...	338	...	131	...	451	...
August .....	158	677	819	890	148	601	303	762
September .....	129	...	219	...	112	...	233	...
October .....	108	...	267	...	138	...	446	...
November .....	127	391	226	692	126	578	185	742
December .....	135	...	222	...	104	...	181	...
1975								
January .....	154	...	217	...	168	...	307	...
February .....	143	497	704	1,489	134	481	341	...
March .....	152	...	191	...	127	...	201	1,396
April .....	147	(NA)	164	(NA)	156	(NA)	190	(NA)
May .....								
June .....								
July .....								
August .....								
September .....								
October .....								
November .....								
December .....								

NA=not available; p=preliminary; r=revised; e=estimated.

## Advance Indicators of Defense Activity--Continued

Year and month	Defense Department military prime contract awards for work performed in the United States, DOD—Continued					640. Defense Department military prime contract awards for work outside the United States, DOD	
	636. Contracts under \$10,000		637. Educational and nonprofit institutions		638. Civilian Health and Medical Program of the Uniformed Services (CHAMPUS), not seasonally adjusted		
	Not seasonally adjusted	Seasonally adjusted	Not seasonally adjusted	Seasonally adjusted	Not seasonally adjusted	Seasonally adjusted	
	(Mil. dol.)	(Mil. dol.)	(Mil. dol.)	(Mil. dol.)	(Mil. dol.)	(Mil. dol.)	(Mil. dol.)
1973							
January .....	341	...	41	...	34	156	...
February .....	320	1,003	45	152	0	151	527
March .....	334	...	43	...	13	125	...
April .....	356	...	46	...	10	213	...
May .....	319	977	35	168	-1	83	645
June .....	551	...	76	...	0	264	...
July .....	225	...	61	...	0	368	...
August .....	210	997	123	259	10	244	497
September .....	390	...	86	...	229	159	...
October .....	319	...	85	...	35	194	...
November .....	335	1,059	87	169	0	240	833
December .....	326	...	29	...	13	186	...
1974							
January .....	327	...	76	...	63	160	...
February .....	333	996	55	224	0	114	594
March .....	329	...	58	...	13	198	...
April .....	384	...	37	...	0	80	...
May .....	382	1,066	38	156	0	94	559
June .....	570	...	70	...	20	333	...
July .....	225	...	162	...	100	421	...
August .....	321	1,116	118	316	0	448	632
September .....	380	...	51	...	0	120	...
October .....	399	...	46	...	240	190	...
November .....	374	1,204	59	159	7	93	559
December .....	343	...	92	...	0	111	...
1975							
January .....	372	...	51	...	5	114	...
February .....	345	1,144	61	206	0	93	388
March .....	419	...	53	...	2	96	...
April .....	418	(NA)	42	(NA)	0	73	(NA)
May .....							
June .....							
July .....							
August .....							
September .....							
October .....							
November .....							
December .....							

NA=not available; p=preliminary; r=revised; e=estimated.

defense indicators

TABLE

**2**

Advance Indicators of Defense Activity--Continued

Year and month	Defense Department gross unpaid obligations outstanding, DOD						648. Manufacturers' new orders, defense products, Census	650. Manufac- turers' new orders from the U.S. Govern- ment, aerospace industries, Census, seasonally adjusted*		
	643. Total		644. Operations		645. Procurement					
	Not seasonally adjusted	Seasonally adjusted*	Not seasonally adjusted	Seasonally adjusted	Not seasonally adjusted	Seasonally adjusted				
	(Mil. dol.)	(Mil. dol.)	(Mil. dol.)	(Mil. dol.)	(Mil. dol.)	(Mil. dol.)	(Mil. dol.)	(Mil. dol.)		
1973										
January .....	35,171	34,280	5,741	5,381	22,326	21,718	1,618	1,589		
February .....	35,287	34,426	5,589	5,523	22,721	21,953	1,633	1,680		
March .....	34,766	34,976	5,273	5,586	22,469	22,291	1,804	1,758		
April .....	34,297	35,140	5,424	5,807	22,044	22,244	1,900	1,783		
May .....	33,409	35,693	5,227	5,886	21,753	22,565	1,789	1,709		
June .....	34,621	35,877	5,301	6,044	22,806	22,558	1,956	1,754		
July .....	e35,500	e36,188	e6,200	e6,385	e22,100	e22,620	1,175	1,676		
August .....	37,069	36,666	6,754	6,420	22,432	22,960	1,898	1,664		
September .....	36,829	36,285	6,719	6,454	22,195	22,556	1,338	3,568		
October .....	38,039	36,682	7,519	6,660	22,679	22,656	1,827	1,635		
November .....	37,680	36,869	7,193	6,673	22,877	22,763	2,124	1,803		
December .....	37,244	36,839	7,064	6,994	22,932	22,615	1,450	1,831		
1974										
January .....	38,249	37,280	7,425	6,959	23,791	23,143	2,183	1,852		
February .....	37,963	37,001	7,055	6,964	24,032	23,175	2,064	1,802		
March .....	37,249	37,436	6,779	7,189	23,847	23,634	1,462	4,737		
April .....	37,264	38,141	7,044	7,550	23,778	23,970	1,527	1,844		
May .....	35,601	38,076	6,476	7,301	23,123	23,987	2,079	3,105		
June .....	37,545	38,947	7,373	8,417	23,994	23,756	1,752	1,904		
July .....	e39,626	e40,435	e8,149	e8,392	e24,316	e24,914	1,377	1,940		
August .....	40,594	40,152	8,426	8,010	23,791	24,351	3,229	1,919		
September .....	41,055	40,488	8,311	7,991	24,283	24,703	1,678	5,731		
October .....	41,201	39,731	8,607	7,610	24,361	24,337	1,401	1,951		
November .....	40,949	40,068	7,906	7,334	25,147	25,022	2,351	p5,655		
December .....	40,407	40,047	7,654	7,556	25,199	25,024	1,668	1,994		
1975										
January .....	40,819	39,823	7,997	7,495	25,484	24,838	1,635	1,817		
February .....	40,008	39,147	7,520	7,460	25,452	24,568	2,147	r1,857		
March .....	39,473	39,791	7,169	7,651	25,688	25,259	1,702	p1,748		
April .....	38,589	39,457	7,276	7,807	24,932	24,957	r1,639	...		
May .....	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	p1,694	(NA)		
June .....										
July .....										
August .....										
September .....										
October .....										
November .....										
December .....										

NA=not available; p=preliminary; r=revised; e=estimated.

\*Indicates series shown in charts. (See pages 7 and 8.)

**Advance Indicators of Defense Activity--Continued**

Year and month	653. Average weekly overtime hours, production workers, defense products industries, BLS		654. Acquisition rate, defense products industries, BLS			655. Layoff rate, defense products industries, BLS		
	Not seasonally adjusted	Seasonally adjusted*	Not seasonally adjusted	Seasonally adjusted*	Moving average of seasonally adjusted data— 4-month*	Not seasonally adjusted	Seasonally adjusted*	Moving average of seasonally adjusted data— 4-month*
	(Hours)	(Hours)	(Per 100 employees)	(Per 100 employees)	(Per 100 employees)	(Per 100 employees)	(Per 100 employees)	(Per 100 employees)
1973								
January .....	2.9	3.0	2.5	2.5	2.3	0.8	0.5	0.5
February .....	3.0	3.1	2.0	2.3	2.3	0.6	0.5	0.5
March .....	2.9	3.0	2.0	2.2	2.3	0.7	0.5	0.5
April .....	2.8	3.1	2.0	2.2	2.2	0.6	0.5	0.5
May .....	2.9	3.2	2.2	2.2	2.2	0.5	0.6	0.6
June .....	2.8	2.8	2.9	2.2	2.2	0.5	0.7	0.6
July .....	2.7	3.0	2.5	2.3	2.2	0.6	0.8	0.7
August .....	2.8	2.8	2.6	2.2	2.2	0.5	0.6	0.6
September .....	3.4	3.1	2.4	2.1	2.3	0.4	0.5	0.6
October .....	3.2	3.1	2.5	2.5	2.3	0.6	0.5	0.5
November .....	3.6	3.3	2.0	2.2	2.2	0.7	0.6	0.5
December .....	3.7	3.3	1.3	2.0	2.2	0.5	0.6	0.5
1974								
January .....	2.9	3.0	2.1	2.1	2.1	0.7	0.5	0.5
February .....	2.7	2.8	1.8	2.1	2.1	0.6	0.5	0.5
March .....	2.8	2.9	1.9	2.1	2.1	0.6	0.5	0.5
April .....	2.1	2.4	2.1	2.3	2.2	0.6	0.5	0.5
May .....	2.8	3.1	2.2	2.2	2.2	0.5	0.6	0.5
June .....	3.0	3.0	2.8	2.1	2.2	0.5	0.6	0.6
July .....	2.7	3.0	2.6	2.4	2.2	0.4	0.6	0.6
August .....	2.8	2.9	2.6	2.2	2.3	0.5	0.6	0.6
September .....	2.9	2.6	2.6	2.3	2.3	0.5	0.6	0.6
October .....	2.8	2.7	2.1	2.1	2.0	0.7	0.6	0.6
November .....	2.9	2.6	1.3	1.5	1.9	0.8	0.7	0.7
December .....	3.0	2.6	0.9	1.6	1.6	0.8	0.8	0.8
1975								
January .....	2.3	2.4	1.4	1.4	1.5	1.2	1.1	1.0
February .....	2.4	2.5	1.3	1.6	1.6	1.3	1.2	1.3
March .....	2.3	2.4	1.4	1.6	(NA)	2.1	2.0	(NA)
April .....	p2.1 (NA)	p2.4 (NA)	(NA)	(NA)		(NA)	(NA)	
May .....								
June .....								
July .....								
August .....								
September .....								
October .....								
November .....								
December .....								

NA=not available; p=preliminary; r=revised; e=estimated. \*Indicates series shown in charts. (See page 8.)

## defense indicators

TABLE

**3**

### Intermediate and Final Indicators of Defense Activity

Year and month	657. Output of defense and space equipment, FRB, seasonally adjusted*	659. Manufacturers' inventories, defense products, Census, seasonally adjusted*	661. Manufacturers' unfilled orders, defense products, Census, seasonally adjusted*	664. Manufacturers' unfilled orders from the U.S. Gov- ernment, aerospace industries, Census, seasonally adjusted*	666. Defense Department progress payments out- standing, DOD, not seasonally adjusted*	670. Employment in defense products industries, total, BLS	
	(Index: 1967=100)	(Mil. dol.)	(Mil. dol.)	(Mil. dol.)	(Mil. dol.)	(Thous.)	(Thous.)
1973							
January .....	79.8	5,210	19,060	...	...	1,160	1,156
February .....	80.6	5,248	19,123	...	...	1,160	1,159
March .....	80.1	5,266	19,343	15,533	6,942	1,156	1,158
April .....	80.0	5,384	19,659	...	...	1,154	1,159
May .....	79.7	5,384	19,780	...	...	1,152	1,160
June .....	80.1	5,477	20,211	16,084	7,026	1,159	1,162
July .....	81.1	5,434	19,824	...	...	1,158	1,163
August .....	79.7	5,555	20,210	...	...	1,159	1,165
September .....	79.8	5,528	20,013	15,904	7,139	1,166	1,163
October .....	80.0	5,531	20,215	...	...	1,168	1,164
November .....	80.9	5,508	20,797	...	...	1,172	1,162
December .....	81.9	5,615	20,740	16,448	7,385	1,172	1,165
1974							
January .....	81.4	5,679	21,372	...	...	1,167	1,163
February .....	80.9	5,837	21,827	...	...	1,160	1,159
March .....	81.0	5,966	21,678	17,383	7,781	1,158	1,160
April .....	80.6	5,978	21,622	...	...	1,157	1,162
May .....	82.2	6,119	22,107	...	...	1,153	1,161
June .....	81.7	6,201	22,261	16,858	8,104	1,159	1,162
July .....	82.6	6,303	22,208	...	...	1,160	1,166
August .....	82.7	6,431	23,941	...	...	1,123	1,129
September .....	83.1	6,377	23,979	19,017	8,531	1,168	1,166
October .....	84.1	6,463	23,715	...	...	1,179	1,175
November .....	83.7	6,477	24,530	...	...	1,179	1,170
December .....	83.4	6,543	24,612	p20,682	9,166	1,168	1,161
1975							
January .....	83.8	6,503	24,603	...	...	1,162	1,159
February .....	r82.4	6,714	24,998	...	...	1,125	1,124
March .....	r82.1	6,867	24,986	(NA)	9,609	1,122	1,124
April .....	r82.2	6,978	r24,883	p24,889		r1,108	r1,112
May .....	p81.8	(NA)				p1,117	p1,123
June .....							
July .....							
August .....							
September .....							
October .....							
November .....							
December .....							

NA=not available; p=preliminary; r=revised;

e=estimated.

\*Indicates series shown in charts (See pages 9 and 10.)

## Intermediate and Final Indicators of Defense Activity--Continued

Year and month	671. Employment in defense products industries, production workers, BLS		673. Index of aggregate weekly man-hours, defense products industries, BLS		675. Index of aggregate weekly payrolls, production workers, defense products industries, BLS	
	Not seasonally adjusted	Seasonally adjusted*	Not seasonally adjusted	Seasonally adjusted*	Not seasonally adjusted	Seasonally adjusted*
	(Thous.)	(Thous.)	(1967=100)	(1967=100)	(1967=100)	(1967=100)
1973						
January .....	615	611	68.7	68.6	88.7	88.5
February .....	616	614	69.1	69.1	89.9	89.7
March .....	614	615	68.8	68.8	89.9	89.8
April .....	612	615	68.4	69.0	88.9	
May .....	610	615	68.5	69.0	89.7	90.2
June .....	614	617	68.9	69.0	90.3	91.0
July .....	614	620	68.4	69.2	89.7	91.4
August .....	612	618	68.6	69.2	91.2	92.4
September .....	618	617	69.5	69.3	94.5	92.9
October .....	620	618	69.4	69.1	94.8	94.2
November .....	621	614	70.0	69.0	96.4	94.0
December .....	625	618	70.4	69.2	99.2	95.1
1974						
January .....	620	616	69.0	68.9	95.4	
February .....	615	613	68.7	68.7	95.1	94.8
March .....	612	613	68.7	68.7	95.6	95.4
April .....	610	613	67.7	68.3	92.6	
May .....	606	611	68.4	68.8	96.0	93.9
June .....	607	610	68.3	68.4	95.3	97.4
July .....	604	610	67.7	68.6	93.4	96.5
August .....	568	574	65.3	65.9	88.1	89.8
September .....	612	611	68.7	68.5	98.2	97.6
October .....	623	621	69.3	69.1	101.2	
November .....	624	617	69.6	69.0	103.6	100.6
December .....	615	608	69.5	68.3	104.7	101.1
1975						
January .....	610	606	68.2	68.2	101.2	
February .....	581	578	66.1	66.1	96.8	101.1
March .....	r577	578	65.9	66.0	r97.1	96.4
April .....	r563	r565	r65.1	r65.7	r95.3	
May .....	p564	p569	(NA)	(NA)	(NA)	96.9
June .....						
July .....						
August .....						
September .....						
October .....						
November .....						
December .....						

NA=not available; p=preliminary; r=revised; e=estimated. \*Indicates series shown in charts. (See page 10.)

## defense indicators

TABLE

**3**

### Intermediate and Final Indicators of Defense Activity--Continued

Year and month	Defense Department manpower, DOD		Defense Department net outlays, DOD				
	677. Military, not seasonally adjusted*	678. Civilian, not seasonally adjusted*	680. Total, military functions and military assistance			681. Operations	
			Not seasonally adjusted	Seasonally adjusted*	Moving average of seasonally adjusted data-6-month*	Not seasonally adjusted	Seasonally adjusted
	(Thous.)	(Thous.)	(Mil. dol.)	(Mil. dol.)	(Mil. dol.)	(Mil. dol.)	(Mil. dol.)
1973							
January .....	2,334	1,073	6,388	6,256	6,295	4,119	4,107
February .....	2,314	1,057	6,054	6,377	6,288	3,988	4,162
March .....	2,291	1,051	6,736	6,366	6,220	4,217	4,167
April .....	2,274	1,051	6,222	6,194	6,281	4,087	3,970
May .....	2,256	1,051	6,213	5,896	6,235	4,033	3,946
June .....	2,253	1,031	7,854	6,597	6,291	4,537	3,935
July .....	2,251	1,019	5,005	5,978	6,330	3,669	4,018
August .....	2,237	1,022	6,649	6,716	6,371	4,279	4,228
September .....	2,232	1,019	5,967	6,598	6,503	4,027	4,316
October .....	2,227	1,022	6,527	6,444	6,441	4,105	4,156
November .....	2,218	1,026	6,766	6,683	6,534	4,359	4,378
December .....	2,202	1,026	5,953	6,228	6,535	4,066	4,226
1974							
January .....	2,199	1,034	6,728	6,538	6,524	4,376	4,333
February .....	2,195	1,039	6,384	6,717	6,527	4,137	4,313
March .....	2,187	1,042	6,702	6,536	6,537	4,398	4,364
April .....	2,174	1,046	6,685	6,458	6,648	4,367	4,221
May .....	2,156	1,053	7,204	6,745	6,712	4,718	4,536
June .....	2,162	1,070	7,872	6,894	6,801	4,835	4,296
July .....	2,162	1,074	5,979	6,921	6,956	4,628	4,917
August .....	2,153	1,064	6,897	7,254	7,068	4,804	4,957
September .....	2,157	1,049	6,948	7,463	7,218	4,575	4,828
October .....	2,156	1,046	7,271	7,130	7,328	4,817	4,853
November .....	2,154	1,046	7,473	7,648	7,302	4,912	5,042
December .....	2,140	1,043	7,451	7,549	7,358	4,742	4,843
1975							
January .....	2,145	1,038	7,051	6,766	7,312	4,775	4,605
February .....	2,146	1,036	7,258	7,590	r7,284	4,727	4,907
March .....	2,137	1,034	7,244	7,190	p7,258	4,736	4,778
April .....	2,127	1,034	r7,190	r6,958		r4,960	r4,744
May .....	p2,124	(NA)	p7,779	p7,493		p4,921	p4,976
July .....							
August .....							
September .....							
October .....							
November .....							
December .....							

NA=not available; p=preliminary; r=revised; e=estimated.

\*Indicates series shown in charts. (See pages 10 and 11.)

**Intermediate and Final Indicators of Defense Activity--Continued**

Year and month	Defense Department net outlays, DOD—Continued			683. Budget outlays for the national defense function, Treasury		685. Defense Department personnel compensation, DOD	
	682. Procurement			Seasonally adjusted*	Moving average of seasonally adjusted data—6-month*	Not seasonally adjusted	Seasonally adjusted*
	Not seasonally adjusted	Seasonally adjusted*	Moving average of seasonally adjusted data—6-month*			(Mil. dol.)	(Mil. dol.)
1973							
January .....	1,355	1,367	1,301	6,534	6,492	2,811	2,686
February .....	1,243	1,329	1,306	6,563	6,496	2,666	2,720
March .....	1,439	1,291	1,291	6,561	6,440	2,728	2,693
April .....	1,287	1,330	1,322	6,500	6,498	2,675	2,686
May .....	1,315	1,243	1,245	6,164	6,384	2,736	2,666
June .....	1,649	1,371	1,276	6,666	6,419	2,615	2,655
July .....	863	907	1,285	5,849	6,451	2,712	2,707
August .....	1,450	1,513	1,300	6,776	6,458	2,735	2,705
September .....	1,239	1,344	1,318	6,754	6,554	2,615	2,720
October .....	1,487	1,425	1,298	6,542	6,512	2,732	2,732
November .....	1,268	1,349	1,357	6,735	6,632	2,765	2,771
December .....	1,124	1,250	1,318	6,416	6,642	2,589	2,663
1974							
January .....	1,270	1,262	1,300	6,569	6,613	2,879	2,738
February .....	1,195	1,276	1,289	6,835	6,617	2,651	2,702
March .....	1,313	1,241	1,268	6,579	6,640	2,700	2,687
April .....	1,382	1,355	1,254	6,567	6,733	2,750	2,739
May .....	1,292	1,227	1,179	6,874	6,768	2,817	2,745
June .....	1,346	1,165	1,204	6,973	6,831	2,710	2,782
July .....	801	810	1,221	6,783	6,962	2,835	2,793
August .....	1,348	1,425	1,224	7,212	7,112	2,814	2,837
September .....	1,251	1,343	1,270	7,362	7,254	2,741	2,823
October .....	1,455	1,377	1,338	7,467	7,393	2,869	2,864
November .....	1,372	1,501	1,440	7,727	7,436	2,827	2,864
December .....	1,439	1,569	1,444	7,809	7,550	2,874	2,924
1975							
January .....	1,427	1,428	1,460	7,039	7,554	2,913	2,762
February .....	1,351	1,444	1,429	7,896	7,526	2,808	2,862
March .....	1,500	1,440	p1,414	7,385	(NA)	r2,812	r2,799
April .....	r1,220	r1,194		7,297		p2,861	p2,830
May .....	p1,467	p1,406		(NA)		(NA)	
July .....							
August .....							
September .....							
October .....							
November .....							
December .....							

NA=not available; p=preliminary; r=revised; e=estimated.

\*Indicates series shown in charts. (See page 11.)

defense indicators

TABLE  
3

Intermediate and Final Indicators of Defense Activity--Continued

Year and month	688. Manufacturers' shipments, defense products, Census		689. Manufacturers' shipments to the U.S. Government, aerospace industries, Census, seasonally adjusted*	691. Ratio, manufacturers' unfilled orders to shipments, defense products, Census		693. Ratio, manufacturers' inventories to shipments, defense products, Census	
	Seasonally adjusted*	Moving average of seasonally adjusted data-5-month*		Seasonally adjusted*	Moving average of seasonally adjusted data-6-month*	Seasonally adjusted*	Moving average of seasonally adjusted data-6-month*
	(Mil. dol.)	(Mil. dol.)	(Mil. dol.)	(Ratio)	(Ratio)	(Ratio)	(Ratio)
1973							
January .....	1,628	1,561	...	11.7	12.3	3.2	3.3
February .....	1,570	1,575	3,599	12.2	12.3	3.3	3.3
March .....	1,584	1,607	...	12.2	12.2	3.3	3.3
April .....	1,584	1,587	...	12.4	12.3	3.4	3.3
May .....	1,669	1,585	3,607	11.9	12.4	3.2	3.4
June .....	1,527	1,571	...	13.2	12.6	3.6	3.4
July .....	1,562	1,561	...	12.7	12.8	3.5	3.5
August .....	1,511	1,552	3,612	13.4	12.8	3.7	3.5
September .....	1,535	1,555	...	13.0	13.0	3.6	3.6
October .....	1,625	1,543	...	12.4	13.1	3.4	3.6
November .....	1,541	1,552	3,611	13.5	13.3	3.6	3.6
December .....	1,505	1,567	...	13.8	13.4	3.7	3.6
1974							
January .....	1,552	1,564	...	13.8	13.4	3.7	3.6
February .....	1,610	1,573	3,721	13.6	13.6	3.6	3.7
March .....	1,612	1,591	...	13.4	13.7	3.7	3.7
April .....	1,586	1,600	...	13.6	13.7	3.8	3.8
May .....	1,594	1,564	3,802	13.9	14.0	3.8	3.9
June .....	1,596	1,541	...	13.9	14.4	3.9	4.0
July .....	1,431	1,551	...	15.5	14.6	4.4	4.0
August .....	1,497	1,565	3,856	16.0	14.7	4.3	4.0
September .....	1,638	1,553	...	14.6	15.0	3.9	4.1
October .....	1,663	1,584	...	14.3	15.3	3.9	4.1
November .....	1,536	1,613	p3,909	16.0	15.2	4.2	4.1
December .....	1,585	1,636	...	15.5	15.0	4.1	4.0
1975							
January .....	1,644	1,646	...	15.0	15.0	4.0	4.0
February .....	1,753	r1,688	(NA)	14.3	r15.0	3.8	4.0
March .....	1,714	p1,709		14.6	p14.7	4.0	(NA)
April .....	r1,742			r14.3		4.0	
May .....	p1,690			p14.7		(NA)	
July .....							
August .....							
September .....							
October .....							
November .....							
December .....							

NA=not available; p=preliminary; r=revised; e=estimated. \*Indicates series shown in charts. (See page 12.)

TABLE

## 4

## Defense-Related Balance of Payments Components

Year and month	546. Transfers under U.S. military agency sales contracts (exports), BEA <sup>1</sup>		547. Direct defense expenditures (imports), BEA, not seasonally adjusted*	696. U.S. Government cash receipts associated with military sales contracts, BEA <sup>2</sup>	
	Not seasonally adjusted	Seasonally adjusted*		Not seasonally adjusted	Seasonally adjusted*
	(Mil. dol.)	(Mil. dol.)		(Mil. dol.)	(Mil. dol.)
1973	Revised <sup>3</sup>	Revised <sup>3</sup>	Revised <sup>3</sup>	(a)	Revised <sup>3</sup>
January .....	...	...	...	...	...
February .....	332	347	1,174	520	566
March .....	...	...	...	...	...
April .....	...	...	...	...	...
May .....	504	455	1,236	544	552
June .....	...	...	...	...	...
July .....	...	...	...	...	...
August .....	489	531	1,072	610	617
September .....	...	...	...	...	...
October .....	...	...	...	...	...
November .....	1,017	1,009	1,177	616	555
December .....	...	...	...	...	...
1974					
January .....	...	...	...	...	...
February .....	639	663	1,166	r499	544
March .....	...	...	...	...	...
April .....	...	...	...	...	...
May .....	738	678	1,324	r645	653
June .....	...	...	...	...	...
July .....	...	...	...	...	...
August .....	716	766	1,279	r996	998
September .....	...	...	...	...	...
October .....	...	...	...	...	...
November .....	852	837	1,335	r817	762
December .....	...	...	...	...	...
1975					
January .....	...	...	...	...	...
February .....	p904	p948	pl,295	pl,081	pl,125
March .....					
April .....					
May .....					
June .....					
July .....					
August .....					
September .....					
October .....					
November .....					
December .....					

NA=not available; p=preliminary; r=revised; e=estimated. \*Indicates series shown in charts. (See page 13.)

<sup>1</sup> Includes deliveries for which, under Public Law 93-199, Israel has been released from its contractual liability to pay.

<sup>2</sup> Excludes funds made available under Public Law 93-199 to release Israel from its contractual liability to pay for defense articles and services purchased through military sales contracts. Quarterly expenditures for such purpose under Public Law 93-199 amounted to (in millions): 1974, IIQ, \$623; IIIQ, \$223; IVQ, \$91; 1975, IQ, \$187.

<sup>3</sup> See "New Features and Changes for This Issue," page 3.

## Appendix A. SEASONAL ADJUSTMENT FACTORS

Series title	1974						1975					
	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June
<b>MONTHLY SERIES</b>												
Defense Department gross obligations incurred:												
617. Total <sup>1</sup>	116.3	107.2	95.2	103.7	92.6	89.5	112.4	92.5	86.7	93.3	82.9	128.5
619. Operations <sup>1</sup>	115.5	100.4	94.7	107.9	93.4	90.5	106.3	88.2	91.2	104.1	93.0	112.9
621. Procurement	69.4	83.7	104.2	118.2	97.1	115.0	133.1	104.0	84.9	80.5	62.0	164.0
623. Gross obligations incurred outside the Federal Government for national defense <sup>1</sup>	113.8	105.1	92.6	108.1	96.6	97.5	106.4	87.7	92.5	94.6	87.7	114.0
625. Defense Department military prime contract awards for work performed in the United States	112.3	98.5	102.4	100.1	84.9	103.3	96.6	83.3	93.2	70.7	69.1	175.6
Defense Department gross unpaid obligations outstanding: <sup>2</sup>												
643. Total	98.0	101.1	101.4	103.7	102.2	100.9	102.5	102.2	99.2	97.8	93.6	95.7
644. Operations	97.1	105.2	104.0	113.1	107.8	101.3	106.7	100.8	93.7	93.2	88.0	87.5
645. Procurement	97.6	97.7	98.3	100.1	100.5	100.7	102.6	103.6	101.7	99.9	96.9	99.5
648. Manufacturers' new orders, defense products <sup>3</sup>	178.1	85.4	116.2	104.9	91.8	106.5	94.9	98.1	98.4	87.5	71.2	93.1
653. Average weekly overtime hours, production workers, defense products industries <sup>4</sup>	- .3	- .1	.3	.1	.3	.4	- .1	- .1	- .1	- .3	- .2	.0
654. Accession rate, defense products industries <sup>4</sup>	.2	.4	.3	.0	-.2	-.7	.0	-.3	-.2	-.2	.0	.7
655. Layoff rate, defense products industries <sup>4</sup>	-.2	-.1	-.1	.1	-.1	-.1	-.2	-.1	-.1	-.1	-.1	-.1
657. Output of defense and space equipment <sup>4</sup>	98.6	98.9	100.1	100.1	100.9	101.8	100.0	99.9	100.4	99.4	99.9	100.7
659. Manufacturers' inventories, defense products <sup>3</sup>	100.2	99.2	99.7	100.6	100.6	99.4	98.6	99.8	101.3	100.6	100.0	99.9
661. Manufacturers' unfilled orders, defense products <sup>3</sup>	101.0	99.7	100.5	101.0	99.9	99.8	101.0	101.2	101.0	99.8	97.3	96.3
Employment in defense products industries:												
670. Total	99.5	99.5	100.2	100.3	100.8	100.6	100.3	100.1	99.8	99.6	99.4	99.8
671. Production workers	99.0	99.0	100.1	100.3	101.2	101.2	100.6	100.4	99.9	99.6	99.1	99.5
673. Index of aggregate weekly man-hours, defense products industries	98.7	99.1	100.3	100.3	101.4	101.7	100.0	100.0	99.9	99.2	99.4	99.8
675. Index of aggregate weekly payrolls, production workers, defense products industries	97.0	98.1	100.7	100.6	102.5	104.4	100.1	100.4	100.2	98.6	98.6	98.8
Defense Department net outlays:												
680. Total, military functions and military assistance <sup>1</sup>	86.4	95.1	93.1	102.0	97.7	98.7	104.2	95.6	100.8	103.3	103.8	118.0
681. Operations <sup>1</sup>	94.1	96.9	94.8	99.3	97.4	97.9	103.7	96.3	99.1	104.5	98.9	112.7
682. Procurement <sup>1</sup>	98.9	94.6	93.1	105.7	91.4	91.7	99.9	93.6	104.1	102.2	104.3	116.0
683. Budget outlays for the national defense function <sup>1</sup>	86.4	95.7	93.4	102.5	99.3	97.1	103.8	95.3	100.7	103.5	102.7	118.1
685. Defense Department personnel compensation <sup>1</sup>	101.5	99.2	97.1	100.2	98.7	98.3	105.5	98.1	100.5	101.1	100.7	98.4
688. Manufacturers' shipments, defense products <sup>3</sup>	98.1	99.1	103.4	99.5	102.9	108.3	88.0	96.4	99.5	99.6	98.9	105.6
<b>QUARTERLY SERIES</b>												
	<b>IIQ</b>			<b>IVQ</b>			<b>IQ</b>			<b>IIQ</b>		
200. Gross national product <sup>3</sup>	98.4			104.5			96.1			100.9		
264. Fed. Govt. purchases of goods and services, national defense <sup>3</sup>	95.0			100.9			99.2			104.9		
546. Transfers under U.S. military agency sales contracts-exports <sup>3</sup>	-54			8			-16			63		
Defense Department military prime contract awards:												
626. Aircraft	104.1			89.0			92.8			115.6		
627. Missile and space systems	130.9			108.9			88.4			69.9		
629. Weapons and ammunition	48.6			120.1			97.5			138.7		
630. Electronic and communications equipment	81.7			96.9			92.8			127.2		
631. Combat vehicles	126.2			101.4			48.2			141.1		
632. Other hard goods	66.5			94.6			90.3			146.0		
633. Soft goods	154.6			103.3			74.7			75.7		
634. Construction	65.1			63.7			89.1			181.4		
635. Services	129.6			109.5			60.8			105.4		
636. Under \$10,000	83.0			92.7			99.3			124.5		
637. Educational and nonprofit institutions	104.7			124.0			80.0			91.5		
640. Outside U.S.	156.4			70.5			78.1			88.2		
Aerospace industries:												
650. Manufacturers' new orders from the U.S. Government	123.4			97.3			91.3			89.6		
664. Manufacturers' unfilled orders from the U.S. Government	102.5			101.1			100.7			95.9		
689. Manufacturers' shipments to the U.S. Government	98.9			104.5			94.2			102.3		
696. U.S. Govt. cash receipts associated with military sales contracts <sup>5</sup>	-55			80			-34			9		

NOTE: The seasonal adjustment factors presented in this table were computed using the techniques described in the Bureau of the Census Technical Paper No. 15, *The X-11 Variant of the Census Method II Seasonal Adjustment Program*.

Monthly data for Defense Department military prime contract awards by commodity category (series 626 to 640) have not been adjusted for seasonal variation. The series on direct defense expenditures-imports (series 547), Defense Department progress payments outstanding (series 666), and Defense Department manpower (series 677 and 678) contain no measurable seasonal variation.

<sup>1</sup> Factors are products of seasonal and trading-day factors.

<sup>2</sup> Prior to 1972, data for gross unpaid obligations outstanding are not available for a number

of months but these gaps were filled with averages of preceding and following months for purposes of estimating seasonal variation.

<sup>3</sup> These series have been adjusted by the source agencies. The factors shown here are implicit seasonal factors for the calendar year 1973 and are derived by dividing the seasonally unadjusted data by the seasonally adjusted data.

<sup>4</sup> These series have been seasonally adjusted using the additive version of the seasonal adjustment program. Seasonally adjusted data are derived by subtracting the adjustment factor from the unadjusted data. Seasonally adjusted data for other series are derived by dividing the seasonal factors into the unadjusted data.

<sup>5</sup> This series is the total of component series which have been adjusted separately by the source agency. The factors shown here are implicit seasonal factors for the calendar year 1973 and are derived by subtracting the seasonally adjusted data from the seasonally unadjusted data.

## Appendix B. AVERAGE CHANGES AND RELATED MEASURES OF VARIABILITY

### Part 1. Monthly Series

Series title	Period covered	$\bar{O}$	$\bar{C}_I$	$\bar{T}$	$\bar{C}$	$\bar{T}/\bar{C}$	MCD	Average duration of run (ADR)	
								CI	MCD
<b>Defense Department gross obligations incurred:</b>									
617. Total	Jan. '57-Jan. '74	18.68	7.38	7.29	0.75	9.72	6	1.53	2.31
619. Operations	July '59-Jan. '74	8.33	2.61	2.50	.64	3.88	4	1.72	3.00
621. Procurement	Jan. '57-Jan. '74	45.13	22.23	22.10	1.68	13.19	6	1.49	2.12
623. Gross obligations incurred outside the Federal Government for national defense	July '63-Jan. '74	(NA)	6.94	6.82	.74	9.21	6	1.52	2.47
625. Defense Department military prime contract awards for work performed in the United States, total	Jan. '57-Jan. '74	33.17	15.07	14.94	1.32	11.33	6	1.39	2.03
<b>Defense Department gross unpaid obligations outstanding:</b>									
643. Total	Jan. '57-Jan. '74	2.08	1.36	.90	.91	.99	1	2.58	2.58
644. Operations	Jan. '67-Jan. '74	5.47	2.48	2.16	1.06	2.03	3	2.00	4.82
645. Procurement	Jan. '67-Jan. '74	2.49	1.51	.99	.99	1.00	2	2.15	4.88
<b>Manufacturers' new orders:</b>									
647. Defense products industries	Jan. '57-Mar. '72	(NA)	15.11	14.89	.97	15.32	6	1.58	2.33
648. Defense products	Feb. '68-Jan. '74	25.69	19.12	19.01	1.59	11.94	6	1.45	2.00
*653. Average weekly overtime hours, production workers, defense products industries (hours)	Jan. '58-Jan. '74	.22	.13	.13	.05	2.84	3	2.13	4.22
*654. Accession rate, defense products industries (per 100 employees)	Jan. '58-Jan. '74	.39	.16	.15	.05	3.12	4	2.26	3.78
*655. Layoff rate, defense products industries (per 100 employees)	Jan. '58-Jan. '74	.17	.13	.13	.04	3.07	4	2.02	4.02
657. Output of defense and space equipment	Jan. '54-Jan. '74	(NA)	.98	.48	.79	.60	1	4.07	4.07
<b>Manufacturers' inventories:</b>									
658. Defense products industries	Jan. '57-Mar. '72	(NA)	1.04	.52	.85	.62	1	2.80	2.80
659. Defense products	Jan. '68-Jan. '74	1.89	1.74	1.16	1.27	.92	1	3.00	3.00
<b>Manufacturers' unfilled orders:</b>									
660. Defense products industries	Jan. '57-Mar. '72	(NA)	1.23	.90	.83	1.09	2	2.76	3.42
661. Defense products	Jan. '68-Jan. '74	1.93	1.64	1.11	.99	1.11	2	2.77	3.94
<b>Employment in defense products industries:</b>									
670. Total	Jan. '58-Jan. '74	.74	.68	.25	.60	.42	1	4.68	4.68
671. Production workers	Jan. '58-Jan. '74	1.02	.86	.43	.69	.63	1	3.62	3.62
673. Index of aggregate weekly man-hours, defense products industries	Jan. '58-Jan. '74	.92	.75	.35	.62	.56	1	4.09	4.09
675. Index of aggregate weekly payrolls, production workers, defense products industries	Jan. '58-Jan. '74	1.61	1.07	.65	.81	.80	1	3.05	3.05
<b>Defense Department manpower:</b>									
677. Military (①)	Jan. '57-Jan. '74	.66	(NA)	.26	.59	.44	1	4.25	4.25
678. Civilian (①)	Jan. '57-Jan. '74	.55	(NA)	.33	.43	.79	1	4.25	4.25
<b>Defense Department net outlays:</b>									
680. Total, military functions and military assistance	Jan. '57-Jan. '74	9.06	3.97	3.87	.75	5.18	6	1.71	3.16
681. Operations	July '59-Jan. '74	7.57	3.52	3.31	.70	4.75	5	1.61	2.43
682. Procurement	Jan. '57-Jan. '74	15.02	11.57	11.44	1.55	7.38	6	1.59	2.88
683. Budget outlays for the national defense function	Jan. '57-Jan. '74	(NA)	4.09	4.02	.69	5.82	6	1.58	3.02
685. Defense Department personnel compensation	Jan. '67-Jan. '74	2.72	1.40	1.21	.53	2.29	4	2.55	4.26
<b>Manufacturers' shipments:</b>									
687. Defense products industries	Jan. '57-Mar. '72	(NA)	2.67	2.49	.87	2.85	3	1.64	3.40
688. Defense products	Jan. '68-Jan. '74	6.98	4.45	4.40	.95	4.62	5	1.41	2.83
<b>Ratio, manufacturers' unfilled orders to shipments:</b>									
690. Defense products industries	Jan. '57-Mar. '72	(NA)	2.95	2.71	.96	2.82	4	1.90	3.81
691. Defense products	Jan. '68-Jan. '74	8.23	5.09	5.05	.93	5.46	6	1.60	3.05
<b>Ratio, manufacturers' inventories in shipments:</b>									
692. Defense products industries	Jan. '57-Mar. '72	(NA)	2.84	2.90	.72	4.01	5	2.46	5.74
693. Defense products	Jan. '68-Jan. '74	8.05	5.37	5.44	.75	7.20	6	1.76	3.35

NA = not available.

\*Measures for these series are based on actual changes rather than percent changes (see definition below). ① indicates measures are based on unadjusted data.

#### BRIEF DEFINITIONS OF MEASURES SHOWN IN PART 1

The measures in this appendix provide a historical perspective for interpreting current changes in each series. They are derived using the Census X-11 seasonal adjustment program. Brief definitions of the measures are given below; more complete definitions appear in *Electronic Computers and Business Indicators* by Julius Shiskin, issued as Occasional Paper 57 by the National Bureau of Economic Research, 1957 (reprinted from *Journal of Business*, October 1957).

"O" is the average month-to-month percent change, without regard to sign, in the original unadjusted series. (See final paragraph below for exceptions to these definitions.)

"CI" is the same for the seasonally adjusted series.

"C" is the same for the short-term trend, which is a smooth, flexible moving average of the seasonally adjusted series.

"T" is the same for the irregular component, which is obtained by dividing the seasonally adjusted series by the short-term trend.

" $\bar{T}/\bar{C}$ " measures the relative smoothness (small values) or irregularity (large values) of the seasonally adjusted series. It is the ratio of the average monthly percent change (without regard to sign) in the irregular component to the average monthly percent change (without regard to sign) in the short-term trend.

"MCD" (months for cyclical dominance) estimates the number of months required for the short-term trend to dominate the irregular component. Average percent changes are computed for spans of from 1 to 12 months for both the irregular component and the short-term trend. MCD is the shortest span of months for which the average percent change (without regard to sign) in the short-term trend is greater than that in the irregular component. All MCD's greater than "5" are shown as "6".

## Appendix B. AVERAGE CHANGES AND RELATED MEASURES OF VARIABILITY—Continued

"Average Duration of Run" (ADR) is another measure of smoothness and is equal to the average number of consecutive monthly changes in the same direction in any series of observations. When there is no change between two observations, a change in the same direction as the preceding change is assumed. The ADR is shown for the seasonally adjusted series (CI) and the MCD curve, which is a moving average (with the number of terms equal to MCD) of the seasonally adjusted series. A comparison of these measures with the expected ADR of a random series indicates whether the changes approximate those of a random series. In a random series, the expected ADR is 1.5 and the actual values fall between 1.36 and 1.75 about 95 percent of the time. For a moving average of a random series, the expected ADR is 2.

Measures for series identified with an asterisk (\*) are computed by an additive method. This method is used for series with zero or negative data, series which could approach zero, and series expressed in percent. In this method, the measures are defined the same as above except for two differences: (1) the measures are based on actual month-to-month changes (rather than percent changes) and (2) the irregular component is obtained by subtracting the short-term trend from the seasonally adjusted series. The average changes shown above for the components of such a series are in the same unit of measure as the series itself. The unit is indicated in the series title.

### Part 2. Quarterly Series

Series title	Period covered	$\bar{O}$	$\bar{CI}$	$\bar{T}$	$\bar{C}$	$\bar{T}/\bar{C}$	QCD	Average duration of run (ADR)	
								CI	QCD
200. Gross national product . . . . .	IQ '57-IVQ '73 . . .	5.70	1.79	0.32	1.73	0.18	1	9.57	9.57
264. Federal Government purchases of goods and services, national defense . . . . .	IQ '57-IVQ '73 . . .	6.18	2.00	.76	1.71	.45	1	3.05	3.05
*546. Transfers under U.S. military agency sales contracts—exports (mil. dol.) . . .	IQ '60-IVQ '73 . . .	76.33	54.22	39.30	29.71	1.32	2	1.67	2.35
*547. Direct defense expenditures—imports (mil. dol.) @ . . . . .	IQ '60-IVQ '73 . . .	34.27	(NA)	26.55	21.70	1.22	2	1.83	2.70
*613. National defense purchases as a percent of GNP (percent) . . . . .	IQ '57-IVQ '73 . . .	.33	.18	.08	.16	.48	1	5.58	5.58
650. Manufacturers' new orders from the U.S. Government, aerospace industries . . . . .	IQ '61-IVQ '73 . . .	(NA)	16.77	14.80	5.06	2.92	4	1.38	1.66
664. Manufacturers' unfilled orders from the U.S. Government, aerospace industries . . . . .	IQ '61-IVQ '73 . . .	(NA)	3.75	2.31	2.51	.92	1	2.32	2.32
666. Defense Department progress payments outstanding @ . . . . .	IQ '57-IVQ '73 . . .	4.73	(NA)	2.25	4.22	.53	1	2.48	2.48
689. Manufacturers' shipments to the U.S. Government, aerospace industries . . . . .	IQ '61-IVQ '73 . . .	(NA)	4.16	3.27	1.99	1.64	2	1.70	2.27
*696. U.S. Government cash receipts associated with military sales contracts (million dollars) . . . . .	IQ '60-IVQ '73 . . .	96.62	73.64	56.86	38.62	1.47	2	1.57	2.35

NA = not available.

\*Measures for these series are based on actual changes rather than percent changes (see definition below). @ indicates measures are based on unadjusted data.

#### BRIEF DEFINITIONS OF MEASURES SHOWN IN PART 2

These measures are defined the same as those in part 1 except that they are based on quarter-to-quarter percent changes. For example,  $\bar{CI}$  is the average quarter-to-quarter percent change (without regard to sign) in the seasonally adjusted series.

In deriving "QCD" (quarters for cyclical dominance), average percent changes are computed for spans of from one to four quarters for the irregular component and the short-term trend. QCD is the shortest span of quarters for

which the average percent change (without regard to sign) in the short-term trend is greater than that in the irregular component. All QCD's greater than "3" are shown as "4". The "Average Duration of Run" (ADR) measures are also expressed in quarters.

As in part 1, measures for series identified with an asterisk (\*) are computed by an additive method. This method is the same as that used for the monthly series except for the use of quarterly data rather than monthly.

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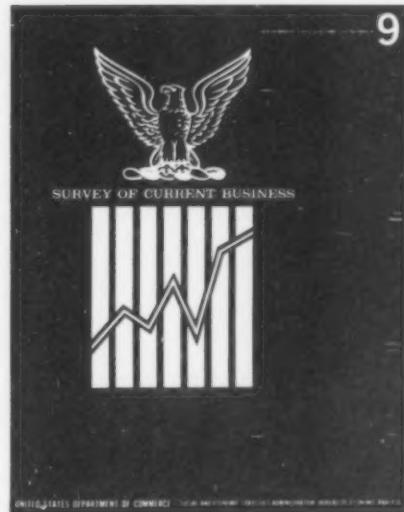
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## ALPHABETICAL INDEX—SERIES FINDING GUIDE

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		Charts	Tables					Charts	Tables		
Accession rate, defense products industries	654	8	21	4/75	4/73	Inventories, manufacturers'	659	9	22	8/74	2/73
Aerospace industries						Defense products	658	9	...	1/72	2/73
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Manufacturers' shipments to U.S. Government	689					Ratio to shipments, defense products	692	12	...	11/72	2/73
Manufacturers' unfilled orders from U.S. Government	664					Ratio to shipments, defense products industries					
Balance of payments (defense-related)						Layoff rate, defense products industries	655	8	21	4/75	4/73
Cash receipts associated with military sales contracts	696	13	27	9/74	10/73	Man-hours, defense products industries	673	10	23	5/75	4/73
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Transfers under military agency sales contracts	546	13	27	9/74	10/73	Military manpower, Defense Department	677	10	24	8/74	8/68
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Civilian Health and Medical Program	638	...	19	...		Defense Department, procurement	621	6	15	4/75	8/68
Combat vehicles	631	...	17	5/74		Defense Department, total	617	6	15	4/75	8/68
Construction	634	...	18	5/74		Outside Government for national defense	623	6	16	4/75	10/73
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Electronic and communications equipment	630	...	17	5/74		Defense Department, procurement	645	...	20	4/75	8/68
Mobile and space systems	627	...	16	5/74		Defense Department, total	643	7	20	4/75	8/68
Other hard goods	632	...	18	5/74		Operations, Defense Department					
Services	635	...	18	5/74		Net outlays	681				
Ships	628	...	17	5/74		Obligations incurred	619				
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Military prime contract awards—See Contract awards											
Net outlays—See Outlays											
Personnel compensation	685										
Progress payments outstanding	666										
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Employment											
Accession rate, defense products industries											
Employment, production workers, defense products industries	654										
Employment, total, defense products industries	671	10	23	5/75	4/73	Shipments, manufacturers'					
Layoff rate, defense products industries	670	10	22	5/75	4/73	Defense products	688	12	26	8/74	2/73
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Overtime hours, defense products industries	673					Ratio, inventories to shipments, defense products industries					
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Federal purchases of goods and services for national defense	264	5	14	9/74	10/73		689	12	...	11/72	2/73
Gross national product	200	5	14	9/74	10/73						
National defense purchases as percent of GNP	613	5	14	9/74	10/73						
Gross obligations incurred—See Obligations incurred											
Gross unpaid obligations outstanding—See Obligations outstanding											
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Defense products	661	9	22	8/74	2/73						
Defense products industries	660	9	...	7/71	2/73						
From Government, aerospace industries	664	9	22	5/75	2/73						
Ratio, unpaid orders to shipments, defense products	691	12	26	8/74	2/73						
Ratio to shipments, defense products industries	690	12	...	11/72	2/73						
Unpaid obligations outstanding—See Obligations outstanding											



